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ABSTRACT

Intended as a resource for both trainers and trainees in early childhood development and education, and based on the principles of active learning and participatory training, this five-part training pack encourages the incorporation of active learning materials in training and invites cooperation in adapting participatory training materials to specific cultural setting. The first part of the training pack, "Introduction to the Training Pack," introduces the principles of active learning and participatory training; discusses reasons for the development of the training pack; outlines the four main distinguishing features of the training materials; and provides an overview of the contents of the training pack. The second part, "Delivering Effective Training," discusses principles related to the processes of training adults and of adult learning, and details seven effective participatory training methods, including role-play, focused activities, and case studies. This part of the training pack also takes a critical look at the training evaluation and makes some suggestions for change. The third part, "Guide to the Development of the Young Child," presents current scientific knowledge about universal stages of development, and of certain patterns and processes that characterize given developmental stages, regardless of culture. The developmental information is divided by age level up to 6 years. The fourth part, "Rationale for Experiential/Participatory Methods," explores the efficacy of experiential/participatory learning in training of early childhood teachers. This part examines the theories of major figures in philosophy, psychology, and education, and discusses the concepts of knowledge, cultural difference, and adult learning from a theoretical perspective. The fifth part of the training set, "Resource List," provides an annotated bibliography and list of resources to assist trainers using experiential/participatory learning. (HTH)

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Introduction to the training pack

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Acknowledgements

This Pack owes its existence to the inspiration and work of many people in the field of Early Childhood Development.

First I owe special tribute to Cassie Landers of UNICEF who not only wrote, in such a sensitive way, the comprehensive *Guide to the development of the young child*, but also was the person who shared my enthusiasm from the beginning about producing a Pack. Indeed, whenever I felt despondent or unsure about the Pack, it was Cassie who restored my original excitement and enthusiasm.

Of crucial importance to the development of Part 2 of the Pack, *Delivering effective training*, was a group of trainers who worked with me and my colleague Jim Smale in a workshop in Scheveningen, The Netherlands, in November 1992. These trainers from Foundation-supported projects were accustomed to using some experiential/participatory training methods in their training and were committed to the principles of development work.

At Scheveningen, we worked together for five days in a way which reflected the Pack's philosophy: using a non-hierarchical approach, questioning and challenging rather than prescribing and evaluating our own training practice. At the end of the workshop, one of the participants expressed her feelings about the experience in these words: 'This workshop has been wonderful in that it has allowed us to experience practically what we mean by participatory training. It will be good to really disseminate that for other people to know'.

After the workshop most of the participants wrote to tell me of different ways they had used the experience in their training. They remained enthusiastic about the pack and they kept my enthusiasm going. The participants were:

Gloria Betran, Centro de Investigación y Desarrollo de la Educación (CIDE) , Chile
Marge Bridle, Development Education Centre (DEC), UK
Margaret Irvine, Border Early Learning Centre, Republic of South Africa
Kamariah Ismail, Training Consultant to Foundation projects in Malaysia
Samira Nairukh, Trust of Programmes for Early Childhood, Family and Community Education, East Jerusalem
Stephen Ngaruiya, National Centre for Early Childhood Education, Kenya
Thelma Perets, Education and Development Project, Israel
Ann Schoenveld, Community Education Development Centre, UK

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Then I must express my thanks to our co-publishers, UNESCO, and, in particular, to John Bennett, Director of the UNESCO programme, The Young Child and the Family Environment for his support and commitment to the Pack and the joint initiatives which will build on it.

Finally I thank all those people in projects supported by the Foundation and those supported by other international organisations whom I have visited and whose practice and observations have helped me so much to clarify my thinking.

Kate Torkington, November 1994

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USING THIS TRAINING PACK

This Training Pack is intended to persuade, not to prescribe. We want readers and users to take from the Pack whatever fits comfortably with themselves and their work, to use the suggestions if and when it suits them, and to be creative in adapting the ideas to their own circumstances and inventing new ones.

The Pack can be used by individual trainers or by groups of trainers. It will probably be most effective if a group of trainers meet together to discuss issues raised in the Pack and try out the activities. It can also be used by individual trainers as a selflearning pack.

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Early childhood development programming is now viewed by research and professional bodies as the first and essential stage in the basic education process. Recent world conferences testify to a growing appreciation of the crucial importance of the child's earliest years, and the need to support families and communities in their role of providing an environment supportive of the child's overall development.

Improving children's health and nutrition is a first duty, but increasingly, in a situation where fourteen out of fifteen of the world's children survive the vulnerable infancy period, governments and civil society are turning their attention to the psycho-social and cognitive development of children. There is ample evidence to show that healthy children who have experienced good early development and learning programmes are much more likely to remain in primary school and achieve worthwhile life goals. In addition, countries that succeed in mobilising government, local authorities, communities and voluntary organisations in the care and education of very young children have been able to decentralise and innovate in their educational systems, and at the same time, make an important contribution toward population information and the education of women.

Among the pioneering bodies in the field of early childhood development programming has been the Bernard van Leer Foundation. Its work in more than forty countries has been exemplary in its emphasis on the overall development of the child, on involving parents and communities, and on developing materials to help professionals and paraprofessionals in their daily work with children. This new Training Pack: *Enhancing the skills of early childhood trainers* is innovative and a further sign of the Foundation's commitment to early childhood development work.

UNESCO has joined with the Foundation in producing the Training Pack and - together with UNICEF and SCF (USA) - in a training initiative which will build on the approach put forward in these volumes. All four organisations see the training of trainers as a crucial element in national capacity building. Based upon the principles of participatory training, the Training Pack is a resource for trainers and trainees. It is addressed particularly to influential top-level trainers in early childhood development and education who can use it to enhance an active learning approach in their training and encourage the co-operative development of participatory training materials adapted to particular cultural settings.

The aim of this Training Pack is not, therefore, to merely provide a body of knowledge but to promote the learning process and give trainers an experience

of what active learning should be. It advocates a learner-centred approach, and the creation of an environment by trainers and trainees through which new knowledge and competencies can be acquired and applied to concrete situations. The Pack encourages the exploration of ideas and skills through flexible structures and methods which include group work, the sharing of experiences and a questioning approach to conventional training contents and methods.

This approach is particularly important in the context of adult and early childhood learning. Frequently, education in schools is compulsory, content-oriented and standardised. The tendency exists to reproduce this model both with adults in training and young children, although it is incongruent with the adult's self-concept as an autonomous individual and, in the case of young children, is quite inappropriate for their highly active learning styles. While it is a resource for trainers wishing to learn more about child development, the Training Pack is above all a tool to promote the active exchange of knowledge and experience in order to produce solutions and results. Such an approach is essential in early childhood training courses, as experiential learning and social interaction are also the learning means of our eventual clients, the young children whom we serve.

In keeping with its mandate for education, UNESCO warmly encourages the Bernard van Leer Foundation's training initiatives. The innovative approach of this Training Pack points the way toward significant changes in the training of those who work in the early childhood development field. Furthermore, it is hoped that the relevance of the Pack to the training of those who work in the formal school system will also be recognised. If we are to effectively address the problems of primary schooling - dropout, repetition and low learning levels - brought into sharp focus by the global Education For All (EFA) initiative, then the training of primary school teachers will need to be a prime target for change. The eschewing of conventional curricula and didactic teaching or training methods in the Training Pack points to the kind of changes which are needed, particularly in the early years in school.

Colin N. Power
Assistant Director-General for Education
UNESCO

Introduction

'It ain't what you do, it's the way that you do it!'

This ungrammatical line from an old song sums up in simple terms one of the main messages in this Pack. **How** trainers train is of equal, if not of more, importance, than the **content** of their training activities. Those who plan training courses are often preoccupied with what trainees need to **know**. As a result, not nearly enough attention, in our view, is given to training methods.

In this Pack we give a great deal of attention to the training method or process. We have committed ourselves to a particular method for reasons detailed later in this Introduction, in the Rationale for experiential/participatory methods and at different points throughout the Pack. This method is the **active, participatory, experiential learning approach**. We hope to convince trainers of its value. We will briefly indicate what we mean by the terms 'active', 'participatory', and 'experiential'.

The terms **'active'** and **'participatory'** refer to the trainee's behaviour in the learning situation. Instead of the trainee being a passive recipient of a one-way process of knowledge tranmission, he or she becomes an active participator with the trainer in defining and designing the learning situation. The term **'experiential'** refers to a learning situation in which the trainer deliberately draws on past and present experiences of the trainee to enrich the learning process. Working together, trainer and trainee can construct situations which give the trainee first hand experiences during the training itself. These experiences can illuminate and bring greater understanding of theoretical concepts.

The context: a love of learning

While the Pack's main focus is on methods and process in training, we recognise that training does not occur in a vacuum. Therefore this pack is firmly grounded in the field of Early Childhood Development (ECD) and, more particularly, in ECD as a crucial component of the **Education for All (EFA)** initiative.

'We' are the staff of the Bernard van Leer Foundation of The Hague, The Netherlands. For many years the Foundation has supported development projects and programmes in developing and industrialised countries. Its work is focused on improving the lives of very young children in disadvantaged circumstances, using a development approach which empowers families and communities.

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Training is one of the most important ways to build the capacities of project staff and their target groups by developing skills and strengths. It can also be an effective way to disseminate the learning from the projects as well as the principles on which they work. However, the Foundation has recognised that much of the training for work in the field of ECD, particularly in developing countries, is traditional and didactic. It often follows the prevalent model for the training of professionals, particularly in the formal education system.

The Foundation has reached this conclusion from an ECD perspective, but similar conclusions were being reached and acted upon at the same time, particularly as they relate to the formal education system, through the Education for All initiative. The aim of this initiative (stated in 1990 at the World Conference in Jomtien, Thailand), was to ensure that all the world's children would have access to primary education by the year 2000. By 1993 this aim had taken on a more qualitative aspect: not only should all children be receiving primary schooling, but the quality of education in primary schools should also be high enough to keep children in school and develop a love of learning in them.

Those with commitment to ECD emphasise above all that Early Childhood Development strategies and initiatives are the real starting point for the development of a love of learning. Learning is seen as a continuum in which early learning, whether in the home or the early childhood centre, forms the essential base on which any later learning is built. Thus success in school depends on early learning.

The Education For All initiative stresses the needs of the most disadvantaged children, particularly in developing countries where educational problems are greatest. The Bernard van Leer Foundation and this training pack share this emphasis.

The principles: effecting a continuum of change

Since the models of training for ECD work are traditional and didactic in many developing countries, the results are shown particularly in early childhood centres. There is evidence of mechanical learning by workers about child development but little evidence of ability to relate to and extend the learning of children and parents.

In fact the principles on which Foundation-supported projects were set up are not being reflected in the training which is taking place. If this situation is to be remedied, this can only be done by influencing training methods. Experiential participatory training methods are the only ones which support the development principles of empowerment, building on strengths, and developing the confidence to enable individuals and communities in disadvantaged circumstances to take control over their own lives.

In acknowledging the importance of convergence between the principles of development work and the principles of the active experiential training method, we recognise that this Pack is not merely about training methods for trainers. This Pack also seeks to set in motion a **continuum of change** whose

ultimate beneficiaries will be young children and their families. The starting point of the continuum is an effort to effect changes in the way trainers relate to the people they train, whether these are other trainers at different levels, para-professionals or professionals who work directly with young children, or the caregivers, including parents, who surround the children.

With this goal the Pack can be used to encourage individual trainers and/or groups of trainers to make changes in their own practice. These changes will ultimately affect other levels of the continuum.

While it is essentially an adult education/training pack, at the same time it is a child-centred pack. We work on this assumption: if influential trainers adopt experiential and participatory training methods with their adult trainees, such training methods will then filter along the continuum. This will result in more appropriate and effective interventions with children and families, the ultimate beneficiaries of any work we undertake.

What is different about these training materials?

This Training Pack has four main distinguishing features:

- The Pack combines an active, experiential learning/training approach with a traditional early childhood content area. While excellent materials are available which help trainers to use experiential participatory learning methods in their training, we do not know of any other materials which indicate how these methods can be applied directly to training in Early Childhood Development.

- The Pack's approach is adult-centred. Although the content area is child development and the ultimate beneficiaries of the training will be children in the context of family and community, the pack focuses on the needs of the adult learner who is preparing her or himself for work with children and families.

- The Pack demonstrates how theory and practice can be harmoniously combined without the one dominating the other. It advocates this approach in training and 'practices what it preaches' by giving due weight to both.

- The Pack particularly targets trainers who have wide influence on other trainers and workers. The challenge is to enlarge the sphere of knowledge and use of experiential and participatory methods.

The Pack's target group

As mentioned above, the Pack first and foremost targets trainers who have great influence on work done with children and families because they stand at the beginning of the continuum of learning. These include those trainers, mainly in universities, teacher training colleges and other training institutions who run early childhood courses throughout the world, but particularly in developing countries. These courses may have national and even international reputations and are often responsible for accrediting workers and trainers, sometimes on behalf of government departments.

The knowledge base of Early Childhood Development which forms the core of such courses will be passed on from trainers to trainers, to grassroots workers, and to parents and other caregivers. The methods used to transmit the information will also be passed on. Thus, if our target trainers use traditional didactic methods, then the worker who relates directly to caregivers is likely to use the same methods. As a result, at the end of this continuum of traditional teaching and learning, the caregivers might **know** what children need. But they may not understand and be able to internalise this knowledge and thus change their behaviour.

This is our rationale for targetting these influential trainers. We seek to encourage them to adopt different methods and become **facilitators** of the learning process rather than merely the owners of the knowledge. At the same time, the Pack materials are easily adaptable for work with people at all levels of training/education. This is crucial because the experience of trainees is recognised as a valid and very important element in the training. Theory or book learning is not seen as the most important element in training; rather it is seen as complementary to the trainees' experience. It should always be pitched at the level most appropriate to the trainee's needs.

We believe that the most effective ECD strategies are those in which parents are the key figures.

Further, use of the Pack is not to be confined to trainers/workers in one sector. The ideas should be available to all those who work directly or indirectly with children and families, whether in the fields of health, education, welfare or any other sector.

We have provided a full rationale for focusing on trainers of trainers in our Pack. We must emphasise once more that we do not see the production of better professional or para-professional workers as the only outcome of our training continuum. The co-publishers of this pack, the Bernard van Leer Foundation and UNESCO, are committed to children and their parents. We believe that the most effective ECD strategies are those in which parents are the key figures. *By* emphasising adult education, we hope that professional and para-professional workers in ECD will be able to work much more effectively with parents.

Can all trainers be facilitators?

This question cannot be answered in a general way. Each trainer has to decide for her or himself whether she or he can work this way. To be an effective

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Facilitation is about believing from the beginning in people's ability to learn and grow, not just about learning training techniques

facilitator requires commitment to the principles which underpin the active, experiential learning approach. Facilitation is about believing from the beginning in people's ability to learn and grow, not just about learning training techniques. However, we are aware that in some cultures the idea of a challenging, non-hierarchical empowering approach to learning and training will not be generally acceptable. With the ideas and beliefs made available in this Pack, trainers may choose whether to accept or use them. If trainers are not prepared or committed enough to take on the role of facilitator completely, then they may be able to experiment with some of the ideas and find ways of evaluating their effectiveness. Because of the philosophy of this Pack, the more facilitative the approach, the more effective the ideas.

Some ways of evaluating your own training are suggested in Part 2 of the Pack.

The Pack aims to:

- present convincing arguments for the use of experiential and participatory learning methodology in training
- provide a knowledge base for child development which emphasises the social and emotional needs of young children
- provide examples of how experiential and participatory learning approaches can be applied to training in the theory of child development
- help early childhood trainers to develop or enhance their skills in using participatory approaches in their training
- provide information about resources which can be drawn upon to further enhance trainers' skills.

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Contents of the Pack

Part 1 An Introduction to the Training Pack

Part 2 Delivering effective training

The practical focus of the Pack. It summarises the principles which underpin the applications of participatory methods to the content area of early childhood development. It also describes a variety of different methods to promote experiential and participatory learning and how these can be used in relation to ECD.

The second section of Part 2 presents some ideas to help trainers develop a critical approach to their own training. It also presents suggestions for changing their methods to make them more participatory and to get maximum benefit from the experience of their trainees.

Part 3 Guide to the development of the young child

Reference materials: comprehensive information about the development of babies and young children, particularly their psycho-social development. This information is based on the most up-to-date understanding of and research on young children. While this may seem to resemble the content area of many traditional training courses relating to young children, the difference is in the way we see this information being used in training. This section can be used as a reference book that facilitators can draw on to supplement the knowledge which participants bring to the training. At the end of this Part is an annotated list of further resources related to ECD.

Part 4 Rationale for experiential/participatory methods

Reference materials: the rationale for advocating these training methods. As the rationale is not based on a specific content area, this section is able to stand on its own. It is intended to help trainers think about whether they should work in a more facilitative way when training those who work directly or indirectly in the field of human development. It can also be used to convince uncertain colleagues or doubting supervisors.

Part 5 Annotated resource guide

Information about further available training materials. These provide further ideas on how to use the experiential participatory mode in training.

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Use of the Pack

In line with our stated principles, this Pack is intended to persuade, not to prescribe. While we want to convince readers and users of the value of using experiential participatory methods in training, we also want readers and users to feel free to take from the Pack whatever fits comfortably with themselves and their work. We challenge users to look critically at their own training and we also ask them to be critical about this Pack, to use the suggestions if and when it suits them and to be creative in adapting the ideas to their own circumstances and inventing new ones.

Thus the Pack may be used as a self-learning pack by individual trainers in the content area of child development. They can dip into the Pack for training ideas, they can consult the reference materials in the Guide to the development of the young child for specific information and/or they can ask themselves the questions from the second section of Delivering effective training, when they feel they want to make more radical changes.

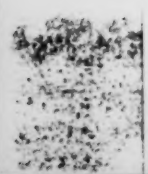
However, this does not imply that the Pack is only appropriate for use by individuals working alone. Indeed it will probably be more effective if a group of trainers meet together to discuss issues raised in the Pack and try out the activities.

The Foundation also intends, in collaboration with a number of other organisations, to produce a training manual. This will provide the format for a workshop, based on the Pack.

Just a beginning

We hope you will enjoy reading and/or working with this Pack. It is just a beginning and may serve as a catalyst to encourage the development of a number of mini packs focusing on different target groups and/or dealing with different content areas. Examples of different target groups: policymakers, para-professionals, parents. Examples of different content areas: specific aspects of child development like play or language development, working with parents, running an early childhood centre.

With these developments as well as our intention to update this Pack in mind, we would very much appreciate having your comments. We would be happy if you would share with us any adaptations you have made to the materials or any additional materials/activities you have created to fit in better with your own setting or culture or target group.



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Enhancing the skills of early childhood trainers

1 **Introduction to the training pack**

2 **Delivering effective training**
The practical focus of the pack

3 **Guide to the development of the young child**
Reference materials: comprehensive information on the development of babies and young children, particularly their psycho-social development

4 **Rationale for experiential/ participatory methods**
Reference materials: the rationale for advocating these methods

5 **Resource list**
An annotated list of selected training materials

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Delivering effective training

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Introduction

We have chosen to put the **active** part of our training pack (Part 2) before the theoretical to stress the importance we place on the practical aspects of training. Parts 3 and 4 of the pack, 'Guide to the development of the young child' and 'Rationale for experiential/participatory methods', present **theoretical** perspectives on **a content area** and on **a process**, respectively. In Part 2 we attempt to help trainers to bridge the gap between practice and theory.

this pack invites trainers of trainers to take a new look at the whole of their training approach to ensure that it reflects the principles in which they believe

Many people who are involved directly in work with young children or who train people in such work are familiar with theories of child development. Many are in sympathy with the principles that underpin participatory learning approaches and some include examples of participatory methodologies in their practice/training. Our pack goes further in that it invites trainers of trainers to take a new look at the whole of their training approach to ensure that it reflects the principles in which they believe.

The principles and the process, in this pack, are applied to one important content area, **child development**, but they are equally applicable to **any content area**. Similarly, although the pack is specifically addressing **trainers**, the principles and the process are applicable to **any level of training**. Much of the material which follows indicates possible applications.

Some terms are used in this section which require explanation. When the term 'family' is used it does not relate only to the nuclear family. For us 'family' is the unit which provides primary care for young children, and this can be the extended family, foster families, sibling-only families, and care-givers not related by blood. In fact, a family for us is any kind of unit whose members view themselves as a family. Similarly, we have frequently used the term 'parent'. This does not imply that we are concerned only with those care-givers who are the 'natural' or biological parents of young children. It is simply a substitute for the rather long-winded term 'primary care-giver'.

This part of the pack is divided into two sections. **The first section**, entitled 'Principles and methods', begins with a summary of the principles underpinning this pack. These are congruent with the principles behind the concepts outlined in more detail in the 'Rationale for experiential / participatory methods'.

The summary of principles is followed by what might be called, an *'à la carte* menu' of participatory methods. Examples are given of how these methods might be used in training in and learning about child development. *'A la carte'* is an appropriate description because it emphasises again that this pack is not

prescriptive but instead offers a range of ideas to those involved in training. All the items on the 'menu' reflect the principles in each of the examples.

The second section asks trainers to take a critical look at their own training approaches and methods. It provides as well some ideas as to how they might adopt participatory training approaches. It is based on the workshop for trainers in projects supported by the Bernard van Leer Foundation, which was referred to in the Acknowledgements in Part 1, 'An Introduction to the Training Pack'. These trainers had a great deal of knowledge and experience in training, and most worked specifically in the field of early childhood development. All were committed to the principles underpinning participatory training and all had used some participatory methodologies in their training. For these trainers the workshop provided the experience of a totally experiential, participatory training event and an opportunity to think about ways in which they could apply this experience to all their training work.

These trainers felt that the workshop should not merely be described in this training pack. They wanted the workshop presented in a way that would encourage others to go through the same experience. To this end the pack presents the process mainly in the form of questions. **These questions are for trainers to ask themselves in order to evaluate their existing training and to identify ways to make it more participatory.**

Principles and methods

Active experiential participatory methods provide a way to translate principles into action. The following principles are drawn from the concepts and philosophy outlined in the accompanying part of this training pack, 'Rationale for Experiential/Participatory Methods'.

Principles relating to process

Learning and training

1. Emphasis on learning rather than teaching in a training programme will ensure a more effective experience for trainers and trainees.

2. Active, experiential learning is more effective than passive learning gained through traditional teaching.

3. As experience is crucial for the learning process, practice should be at the core of training and theory should illuminate practice.

Adult learning

1. In the adult learning situation, responsibility for learning is shared between the adult educator and the adult learner.

2. Many adults enter learning experiences with feelings of uncertainty and trepidation. These feelings are often the result of earlier educational experiences.

3. Rejection of traditional teaching and passive learning situations may be conscious or sub-conscious. Many adults may benefit considerably from active participatory learning methodologies.

4. The role of the adult educator involves:

- developing an understanding of the personal and social history of the learner and sensitivity to cultural and traditional influences on learners
- appreciating and using the prior experience of learners as an integral part of the learning experience
- organising the learning environment to facilitate experiential learning
- preparing learners to engage with and be challenged by contradictions and uncertainty
- devising and posing problems for learners to solve

- facilitating dialogue and reflection as part of the learning process.

Principles relating to content

Child development

1. Child development is holistic. Physical aspects of survival (health and nutrition) should not be separated from emotional, social, psychosocial and cognitive aspects.

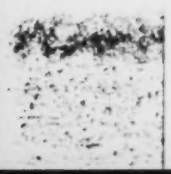
2. Cultural influences on child development are important. Emphasising the positive aspects of current child-rearing practices, provides the best foundation for new learning.

3. Positive healthy child development is best achieved by working with the children's own families and communities.

Families

1. Families care about their children and want the best for them.

2. Families already know a great deal about child rearing. This knowledge should be respected. Further information and support can help create an environment that will ensure positive child development.



Methods to promote experiential / participatory learning

Some of the main methods used to promote experiential/participatory learning follow. Examples are based on training in child development.

Working in groups

Working in groups is the common element in all the methods presented

Working in groups is the common element in all the methods presented. Whether you are training eight or twenty trainees, participatory activities involve some form of grouping. When all trainees work together as one large group on a common task, this is often called the **plenary** group.

The full group may be broken up into smaller groups. With fewer people, tasks can often be accomplished more efficiently, issues addressed more deeply and subject matter better covered. Each small group can study a different aspect of the subject and share their findings later on rejoining the plenary group.

Working in small groups can be a very good way of encouraging trainees to work co-operatively and support each other – if the trainer has the skills to facilitate these processes. For example, if the whole group is small (up to about 15 participants), and the trainer feels the task would be better accomplished by dividing it into smaller groups (for example, three groups of five), the trainees could be left to form their own groups. The trainer needs to make certain that no-one is left out when the groups are formed.

However, if the participants in a training situation do not know each other and/or their numbers exceed 15 or so, the trainer needs to give some pre-training thought to the question of group composition. If balanced groupings are to be created, the following should be taken into consideration:

- gender of the trainees
- status
- different working environments (rural, urban, etc.)
- different target groups (young children, parents, health workers, teachers)
- previous groupings already used on the training course.

According to the tasks to be set, group formation may be on the basis of either homogeneity (participants have much in common) or heterogeneity (deliberate combining of participants with different experiences and background).

In training situations with large numbers, trainers may have to become more prescriptive in forming groups. A great deal of time can be lost trying to form free choice groups. The purpose of working in small groups could be defeated if

the trainer planning the task does not pay sufficient attention to group composition processes. Even though the trainer may not know the participants before the training session, it is important to try to obtain enough information, before the training begins, to facilitate effective group working.

Respect for the person is inherent in working with small groups, as in the whole of experiential/participatory learning. While small group work encourages people to express themselves, to share information and to participate in role-play and other activities, it must also respect their choices about whether to do these things and their level of self-expression. **No-one in a group should feel compelled to do anything.**

For the purposes of this pack working in groups has been dealt with rather briefly in order to explain some of the terms which will be used in the descriptions of participatory activities. However, a great deal has been written about groupwork so for those who want to learn more about this subject some useful references are provided in Part 5 of this pack.

● Brainstorming

Brainstorming is a way of generating ideas

Brainstorming is a way of generating ideas. It can be used by facilitators to:

- find out what participants know already
- find out what participants want
- form a basis for problem-solving
- facilitate the sharing of feelings.

The process asks participants to come up with as many ideas, thoughts and comments as possible in a given time on a given subject. Part of the briefing is that any idea on the subject, however strange, is acceptable. In the first stage of brainstorming, the facilitator/recorder writes up the contributions on a blackboard/flip chart **without comment**. In the second stage the contributions are discussed and evaluated. The following are some examples, using child development as the content area.

Finding out what participants already know

In a training course for para-professionals, the trainer wants to know what participants know about basic nutrition. The question is posed: *'What do two to three year olds most like to eat?'*

The participants could be asked to make their own individual lists. Or they could work in pairs, small groups or in the full group with the trainer recording contributions on blackboard or flip chart. The latter arrangement is speedier since the evaluation is done with the whole group. Usually, if lists are made by individuals, pairs or small groups, an intermediate stage is needed to make the lists available to the whole group.

Once the list is complete, the trainer can ask the participants to help classify the random list by grouping the suggestions into categories like fruit,

vegetables, meat, fish, confectionery, etc. Discussion can then be promoted by questions from the facilitator, such as:

'Which of these foods should we encourage children to eat more of and why?'
'Which of these foods should we encourage children to eat less of and why?'
'Can we think of ways that we can work with parents to help them provide nutritious food for their children?'

Finding out what participants want to know

A facilitator preparing a series of discussions with a parents' group on child-rearing might ask the participants to brainstorm what aspects they would like included in the series. Suggestions might include sleep problems, the baby who cries a lot, the toddler with frequent diarrhoea, etc. In this case, the list would be evaluated to reach consensus on the content of the programme, the order in which topics are to be addressed and how each content area might be dealt with.

For example, the group or facilitator might suggest that different members of the group take responsibility for introducing a chosen topic. Another possibility is to invite people from the community with relevant experience, such as the village health worker. If outsiders are invited, they should be well-briefed, preferably by the participants, so that they do not seize the opportunity to deliver a lecture. A formal lecture may spoil the participatory atmosphere which the facilitator and the group have established.

Form a basis for problem-solving

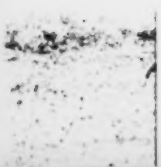
Brainstorming can be used as a basis for problem-solving. For example, if a trainee encounters a difficulty in her practice situation, the trainer could ask her fellow trainees to brainstorm solutions to the difficulty. The question might be: *'How would you deal with Esther who continually bites other children in the early childhood centre?.'* Used in this way, brainstorming draws on the experience and prior knowledge of trainees to solve problems. This might include an answer like: *'the teacher should bite Esther back'*. In evaluating possible solutions, the trainer could ask questions about the effectiveness, the positive and negative aspects and the practical implications of each solution suggested.

Facilitating the sharing of feelings

Sharing of feelings about experiences can be facilitated by brainstorming

Sharing of feelings about experiences can be facilitated by brainstorming. For example, a video on child abuse shown during a training programme might arouse many strong feelings. Recording of these feelings during a brainstorming session would acknowledge their validity. It could also lead to an important discussion about the effect that feelings can have on the actions of those who work with young children and their parents.

The need for sensitivity on the part of facilitators in such a situation cannot be over-stressed. However, there are other less dramatic and public issues which would benefit from a brainstorming session and allow feelings to be shared. Examples are the feelings in a group of new mothers about breast-feeding or a group for parents sharing feelings about their handicapped children.



● Input by trainer followed by small group discussion

Brainstorming draws on the knowledge and experience of trainees, identifies wants/needs and feelings and provides a basis for problem-solving. However, it is clear that gaps in trainees' knowledge will be identified in the evaluation stage of brainstorming.

To help fill these gaps, the trainer can present up-to-date information, theory and research findings to reinforce, adapt and modify the knowledge base of the trainee group.

The word 'input' is used to describe information provided by the trainer or, in some cases, by a trainee to provide theoretical 'external' views and/or evidence. This input supplements the knowledge emerging from the experience and practice of the trainees.

If this kind of information is required, the trainer or a trainee (or group of trainees) should organise the information carefully and concisely as an assignment, following a logical sequence. Although there is a degree of spontaneity in brainstorming – the trainer can never be sure what knowledge will emerge from the trainees – preparation is vital. By taking time to formulate the questions to be put during the evaluation of the activity, the trainer will gain a good idea of what may be needed by way of input to supplement the brainstorming.

To illustrate this, let us return to the example of Esther, the little girl who bites. The trainees have come up with some ideas. Input may be useful on the reasons for aggression in children and differences between instrumental and hostile aggression. Research findings from studies of young children will also be a useful learning tool as the minds of the trainees are already engaged by this issue and would view the information as wholly relevant. Trainers needing information on child development as a basis for their inputs should refer to Part 3 of this pack.

After the input the trainer could divide trainees into small groups to discuss the information provided. While this discussion may be unstructured, the trainer could also provide questions to help the group focus its thinking. For example, the trainees might be asked to think about the suggestions that emerged in the brainstorming and to review these suggestions in the light of the new knowledge gained from the input.

In other learning situations, when less depth of information is required, the input might not be presented verbally. After the brainstorming on children's food preferences, for example, the trainer could provide a written handout with simple facts about different foods and their nutritional values. Even if there is illiteracy, the facts can be provided by using pictures of food with illustrations of children to indicate the relationship of different foods to aspects of a child's development. The pictures also show the problems that can develop through nutritional deficiencies. Further discussion of the facts can then take place in the group.

Role-play

Role-play allows people to rehearse their own roles in possible new and difficult situations

Role-play is a very valuable method in experiential learning. It allows people to rehearse their own roles in possible new and difficult situations. Or they can perform roles which allow them to 'step into another person's shoes'. Role-play, therefore, is an effective way to develop skills and identify and understand one's own attitudes and values as well as those of others.

As an example, we return again to little Esther. Two possible role-plays could provide a learning experience. The trainee child care worker who brought the problem to the group could be given the opportunity to rehearse how she would handle Esther the next time she bit another child. Another trainee is asked to play the part of Esther. She should also have a chance to play Esther herself to have the experience of putting herself 'into Esther's shoes' to understand her better. Other trainees would also be given the chance to play the roles to reveal different ways of handling the same situation. While two trainees are role-playing, others in the group observe the interaction and share their comments at the end. The steps for role-play are:

Explain the purpose of the role-play.

- to rehearse ways of dealing with a difficult situation
- to provide an experience of stepping into another person's shoes
- to observe and assess different ways of responding to the same situation
- to provide feedback to trainees on their particular approach to the situation
- to practice the skill of giving appropriate and constructive feedback.

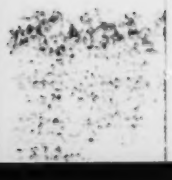
Explain the 'problem' situation. In this case, a trainee child care worker, has seen (and heard!) Esther, a three year old, bite another child. She wants to know how to handle this problem.

Choose the players. The trainee who shared the problem may or may not be comfortable playing her own role at the beginning of the role-play. If she is comfortable,she can be the first to be asked to do this, with a volunteer playing Esther. After this other members of the group can volunteer to play the roles. The trainer may choose to play a role to convey a particular point.

Feedback should be constructive and positive behaviour stressed

Explain the 'observer' role. The observers should focus on the trainee's words and actions and the response from the other(s) in the role-play, not attempting to analyse why she did it or infer feelings. In other words, the observers should pick out key points in the interaction, particularly in terms of non-verbal communication. For example, the 'child' may have avoided eye contact with the 'teacher'. Or the 'child' may have wriggled or closed her eyes when asked a question by the 'teacher'. Feedback should be constructive and positive behaviour stressed. Criticism should not be on a personal level.

After the role-play. The 'players' as well as the observers should have the opportunity to talk about the experience. They should try to assess the



experience and explain their feelings and actions. An important part of the feedback is for all participants to try to identify what they have learned with the help of the trainer.

The trainer can then conclude the session by summarising the main learningpoints from the role-play. These may include evaluation of the different solutions which may have emerged through the role-play and comments on the process and its effectiveness.

In this example, the role-play rose spontaneously from a discussion of practice. However, the trainer may choose to start a 'theory' session, with a brief input on aggression in very young children (See Guide to the Development of the Young Child). One or two students could be asked to role-play a particular incident relevant to the subject. The trainer will have thought of this in advance and will probably draw on an incident observed or reported in supervising practice.

Role-play can be an effective method at many different levels of training and education. In training para-professionals to undertake visits to parents in their own homes, for example, role-play can provide an opportunity in a non-threatening atmosphere to practice the skills they will need in their work. The role-play could be a rehearsal of the first visit to the home, with trainees taking the roles of mothers, fathers, grandmothers, children and, of course, the para-professionals themselves.

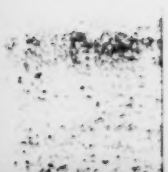
In parent education groups, role-play can serve both as learning and as an enjoyable experience. Parents in different parts of the world will bring to parent groups a variety of issues they consider important, such as the survival of their young children, behaviour problems, etc. Role-playing could help parents in approaching local officials to improve sanitation or water supply or in dealing with a child who is behaving badly. By playing both parents and 'officials', the parents can gain new ideas and knowledge.

Some people feel too shy or embarrassed for role-play. **They should never be forced to do so.** If the experience is uncomfortable for a trainee, then the role-play will not provide the learning that is intended. Shy trainees can still benefit in the role of observer. However, shy people often overcome their inhibitions when they see their colleagues enjoying and learning from role-play.

There is also the possibility that some trainees may see role-play as trivial. They may feel that they are being treated like children and that this is merely an interlude between 'real' learning sessions. This is addressed more fully below.

● Focused activities

Activities under this heading are frequently called participatory **games**. This is because these activities create an atmosphere of enjoyment and release from tension. However, trainees who believe that learning is a wholly serious and even uncomfortable experience may reject games. This is not an unusual view



Learning about process

The following icebreaker is about names. Participants are divided into pairs to talk about their own forename and the name of one of their own children or siblings. Discussion can include such things as the reason for names being chosen, feelings about names, nicknames, etc. Then each of the partners tells the whole group what she has learnt from the other person. This should only be done on a voluntary basis. No-one should feel forced to disclose things about themselves or others in either the pair situation or in the full group.

After this the trainees should be asked to share their feelings about the exercise. What do they think they have learned? They should consider this not only in terms of new information about each other but as to whether they were comfortable with the sharing process. The trainer should join in the activity to reinforce the principle that learning is a shared activity between trainer and trainees.

An interesting alternative to the 'names' activity: participants in a training event each draw a simple picture representing two things which are very important in their lives, e.g. their family, a leisure activity, etc.. The rest of the activity proceeds as above with sharing in the group.

Ability to draw is entirely unimportant!

in those who have been taught didactically at school (See part 4). They may think that enjoyment during training indicates an absence of learning.

Without sacrificing the enjoyment factor, therefore, trainers need to be sure that the activity contributes to the learning experience, whether in relation to the **process** or the **content** of the programme. For example, in relation to **process**, trainers may select an activity that helps trainees feel comfortable at the beginning of a course and get to know each other and the trainer. **Icebreakers**, as these activities are often called, give trainees permission to talk about themselves, share experiences with each other and the trainer and validate these experiences in terms of their contribution to their learning. (See Part 5' for icebreaker ideas).

Focused activities can also relate to course **content**. They can be used to find out what trainees already know about child development from their own experiences as children/siblings/parents. The trainer can then build on this knowledge through the practical and theoretical part of the training.

Training materials in the field of self and community development often include activities to help trainers/trainees understand process as well as content. The Resource list in part 5 gives some details. The examples on pages 10,11 and 12 illustrate the use of games and activities as they relate to learning about process and content.

In summary, before using 'focused activities' and role-play, trainers should be convinced that these activities will advance the learning of everyone involved

in the learning process. They should define exactly what is to be learned from each activity and seek the views of the participants on what they have learned.

Learning about content (Ages and Stages Card Game)

This activity requires considerable preparation on the part of the trainer. Using information from Part 3 on the ages and stages of development of young children, the trainer provides a pack of small cards, with a statement on each about one aspect of the growth and development of young children. Examples are:

'The baby sits up without support'
'The baby follows movement with his eyes'
'The baby walks without support'
'The young child says her own name'
'The young child puts two or three words together to form a sentence'
'The baby points with her index finger'
'The child shows he is sensitive to what is seen as good or bad in his society and anticipates adult reactions to his behaviour'.

The statements on the cards can be made as simple or as complex as needed. The number of cards provided will depend on how much the trainer wants to cover in one session. There should be at least one card per member of the training group. The trainer must also provide a number of small boxes, large enough to hold the cards. Each box has a different label, for example, 'Birth to 1 month', '1 month to 3 months', '3 months to 6 months', '6 months to 9 months', etc. The number of boxes will depend on the age range covered in the training and the division of the age-groups should match the statements chosen for the cards.

The pack of cards is then shuffled and the members of the trainee group each choose one card. Each member reads out to the group the statement on her card before putting it in the box which seems to her to suggest the right age-range to fit the statement. Once she has done this the group discusses whether the choice of box is appropriate.

The trainer can help the process by discussing, for example, the wide span of normality in the rate of development. The trainees have already indicated their different views of the 'right' age for particular developments to occur by their choice of box. It is rare in a group of adult students for any one student to be very inaccurate, as most of them will have personal experience as siblings and/or mothers.

This activity can also be used to introduce other issues in child development such as abnormal rates of growth and development in young children and the relevant indicators. As suggested earlier, these other issues can be covered with a brief input from the trainer in the form of questions about what trainees have observed in their practice or in their personal lives. In the latter case, the trainer can supplement the trainees' observations with theoretical knowledge as appropriate

Using case studies

Case studies are similar to many other active experiential methodologies as they can be used to start discussion. Case studies can help to develop skills, test knowledge and explore attitudes of trainees. Case studies help trainees learn the skills of problem-solving, decision-making, information gathering and co-operative working. Trainees can draw on the knowledge that they have gained from their experience as well as from the theoretical part of the course. They can learn to identify their own attitudes and values as well as those of others.

Learning about Process and Content

An activity called 'Likes of Childhood' is also suitable for all levels of training. Trainees are asked to remember and then write down or draw pictures of three things they liked during their early childhood. If trainees feel they are too old to remember, they can think about what their children like. They then share their memories and preferences with a partner. Following this, in the whole group, the trainer will ask them to share with everyone. The trainer then records the recalled experiences on flip chart, blackboard or large sheet of paper. The important thing is that they can be seen by all members of the training group. The next step in the activity is to group the points. Repeated use of this activity in many different situations and cultures has shown that trainees invariably come up with the same kinds of experiences. For example, they recall experiences which relate to: close relationships with parents or grandparents; childhood adventures; being and feeling secure; fun with siblings and peers, etc. When the trainer and the trainees group the points under these kinds of headings, it quickly becomes clear that what started as an activity on 'the likes of childhood' has **actually served to identify the needs of children.**

This activity brings about very positive feelings in a training group. Because the activity centres on likes rather than dislikes, it produces warm and pleasant feelings, underlines similarities in experience and, most important, assures trainees that they know more than they think.

They are now receptive to further knowledge to build on what they already know. The trainer's role is to extend their knowledge in line with the requirements of the work for which they are being trained. Two examples follow.

Children's **need to be secure** requires a certain amount of routine in their lives and a great deal of consistent behaviour in their caregivers. If the training is preparing people to work in an early childhood centre, then the discussion and input will be concerned with the kind of routine that gives children confidence, how it can be established, and how consistency can be maintained in centres.

Children's **need to have stimulating experiences** is expressed through remembrance of childhood adventures. When this activity is carried out with a parent group, the discussion and input can move on easily to what stimulating and low cost experiences parents can provide for their own children. This could also be linked with provision of stimulating activities in early childhood centres.

While case studies do not have to be lengthy, they do have to be relevant to the content area and to the situation/culture in which they are being used. The best case studies, of course, draw on real-life situations and can be built around an issue which the trainer wishes to deal with in the course of the training. This is not to say that the trainer should always design case studies. In fact, the task of producing a case study can provide a good learning experience for the trainee.

As an example, a case study might be drawn up by a trainee who has been placed in an early childhood centre for her practical training. She has noticed that one of the children is apathetic and listless and appears to show clear signs of malnutrition. This child becomes the focus of the problem-solving, with other important information to provide the context. For example, does the centre have a feeding programme? What is known about the family? Are there are good links between the centre and parents? Have the trainee and the permanent staff of the centre discussed the issue? Is there a village health worker? Is there good contact between the health worker and the centre?

A good case study can promote learning in terms of knowledge, skills and attitudes

The case study should raise as many such questions as possible. The training group can then be divided into a number of small groups (no more than four or five members) to read and discuss the case study and come up with ideas to solve the problem. These ideas can then be shared with the whole group. A good case study can promote learning in terms of **knowledge**, **skills** and **attitudes**.

Knowledge. The trainees will either draw on personal knowledge, or on information dealt with earlier in the training. Or they may at this point, seek information from the trainer on, for example, nutrition or the signs of malnutrition. They will learn something about other services for children and families and the relationships – or lack of them – between services. They will also learn something about working relationships in centres and something about the background of children. Most critical, they will appreciate the importance of securing this contextual information.

Skills. The trainees will learn some of the skills of problem-solving, decision-making, information-gathering and cooperative working. The discussion may go on to rehearse, through role-play, the skills of approaching parents or health workers or helpful or unhelpful members of staff at the early childhood centre.

Attitudes. The trainees will be able to explore their attitudes about involvement with parents or other workers. They can also deal with any judgmental feelings they may have towards certain families or parents and even any fears they have about approaching centre staff or their supervisors.

The role of the trainer in this activity is to:

- compile a case study to facilitate learning or to guide the trainee who is compiling the case study

- to explain the purpose of the activity to the whole group
- to serve as a resource to the small groups as they work on the case study
- to facilitate an evaluation and/or summarise key learning points at the end of the plenary session.

At other levels of training/education, a simpler adaptation of the case study approach could be used which does not require literacy. This is called the **'What Would You Do?'** activity. It requires either short written or pictorial descriptions of situations. Some **written examples for use** in a parents' group could be:

> *'Your new baby does not appear to respond to loud sounds'*
> *'Your new baby rarely moves his arms and legs and seems stiff'*
> *'Your six-month old baby does not smile or make squealing sounds like your sister's baby'*
> *'Your toddler has a tantrum in the market because you will not buy him sweets'*
> *'Your four-year old girl is aggressive towards other children and refuses to share toys'.*

Some of these examples have been taken from the 'Guide to Early Childhood Development', which offers many more ideas to start off discussion round the question *'What would you do?'*

Pictures and drawings

Many situations can be presented in a drawing or a cartoon. Some organisations produce booklets with pictures large enough to be viewed by a small group. For example, one series called *'What Would You Do'* depicts incidents relating to three age groups: babies, toddlers and young children (see part 5). They include a picture of a baby crying in the middle of the night and a frantic mother unable to soothe him, a toddler having a tantrum in the market and a young child clinging to his mother and weeping at the door of the early childhood centre.

Facilitators in parent groups should have enough knowledge of the concerns of parents and of the culture of the society/locality in which they live to select situations which are culturally relevant to child-rearing. Ideally, the process should use the artistic skills of local people, or the parents themselves, to produce the 'situation' pictures.

In a variation on this theme, more complex and detailed pictures are used to illustrate a variety of community problems which apply to the health and safety of young children. For example, *'Where there is no Doctor'* (see part 5) has a picture which illustrates a number of everyday things going on in a village situation which are detrimental to the health and safety of all villagers, particularly children. An example would be animals fouling an area where food is being prepared. The question raised here is: *'What do you see going on in this village which is harmful to the health and safety of the villagers?'* The question should lead to discussion and may even lead to action.

Use of visual and audio-visual aids

Visual and audio-visual aids can be very useful in active experiential training. They include: flip charts, handouts, overhead projectors, slide projectors, photographs, television (including closed circuit) and videos.

These all have visual and/or aural impact. While many people feel that they learn better if they can see information written down, others find images more powerful in learning than the written and spoken word. Audio-visual aids thus extend the learning repertoire of both trainers and trainees. As slide-projectors have limited use and closed-circuit television is very expensive and highly sophisticated, we limit the discussion below to the more accessible aids. There are a number of references in the Resource list which give more comprehensive information on the use of learning aids.

Flip charts

A flip chart is probably the most effective aid for a facilitative trainer. There is no need for an expensive easel or special blocks of paper to fit the easel: a flip chart can simply consist of large sheets of paper that can be attached to walls with drawing pins or sticky tape. This aid is portable and can be used in any kind of room. Unlike a blackboard, it can retain information for as long as

Flip Charts – Training Tips

Using different coloured pens is helpful but not essential.
If possible, try to encourage one of the trainees to write up the flip chart while the trainer continues to facilitate the session.
If possible, leave completed sheets from previous sessions up as a reminder for trainees after the session has finished.

Overhead Projectors – Training Tips

Test the equipment in the room to be used, before the session.
A common failing is that trainers face the screen and talk for long periods and become too interested in their material and lose contact with their audience.

Handouts – Training Tips

Do not read out the handout, this is a recipe for trainee boredom.
Use handouts for essential detailed information which can be added after the discussion.
If the handout is essential for the discussion, it is often helpful to give trainees time to read the notes at the start of the session.
If the handout is to be distributed at the end of the session, tell the trainees this at the start of the session.
After-notes, prepared after the session and given out at the start of the next session, can round things off and act as a reminder of the content of the previous session.

required and is an effective way of presenting small group reports to the whole group. All that is really needed is clear and legible handwriting!

Overhead Projectors

These are useful for pre-prepared inputs/lectures but they are expensive and not very portable. As they require electricity, they may not be convenient for isolated rural areas in developing countries.

Handouts

These are useful for summarising preprepared inputs. They can be handed out before the session to give shape and form to the input and allow trainees to add their own notes under the headings. They can also be handed out after the input to remind trainees of theoretical issues related to their practice.

Photographs

Like pictures and drawings, photographs provide excellent discussion starters. They have the advantage over drawings of being more realistic. Also, if they are taken by trainers or trainees in their work settings, the photographs will always be culturally appropriate.

Photographs – Training Tips

Before using new material, test it out on a few people from a background similar to the trainees.
Where available, newspapers and magazines might be a good source of photographs which trainees could collect and display.
Where facilities exist, trainees can be encouraged to take their own photographs to illustrate themes and training projects.

However, photographs gathered this way can present problems. They immediately personalise issues and allow local children/parents to be recognised. This can be distracting or even stigmatising. Also, in some societies the taking of photographs is against cultural beliefs and represents violation of the person.

Photographs can be used for different levels of learning. For example, photographs of abused, neglected or malnourished children can be used to train professionals working in the field of child abuse. Photographs will clearly show signs of abuse, neglect or malnourishment to help teachers, social workers, health workers recognise them in their practice. Photographs can also be used in training professionals and para-professionals to discuss attitudes and values and to provide information. For example, photographs can depict the widest possible interpretation of families, showing families from different ethnic groups, different levels of income and different family structures. Photos of one parent, two parent and extended families can be used to start discussion of 'What is a Family', opening up examination of differing values and attitudes. (See Part 5)

Photographs can also be used to help parents recognise signs of malnutrition. More positively, photographs can help them recognise that the child's learning begins within the family since they can show young children involved in everyday activities. Examples from different societies might be helping parents working in the fields, counting cattle, eating with chopsticks or caring for younger children – all learning experiences. Photographs from any one society could show young children developing mathematical skills, gross and fine motor skills, and language skills at home, well before they go to school.

Trainers can use different techniques with photographs according to the subject matter. With small groups individual photographs can be passed around and comments sought, while with larger groups photographs can be displayed. Pairs of group members can discuss a chosen photograph together and then with the whole group.

Video

While video is increasingly becoming one of the most popular training tools, there is a need to guard against its indiscriminate use. A video may have some relevance to the subject in hand, but it is sometimes used as a means of giving the trainer a break!

Most videos will provide knowledge and information, and can, therefore, be used in the same way as the trainers' input to supplement the experience and practice of trainees. But videos are most effective when they are built in to the training programme, with appropriate pre-showing preparation and post-showing follow-up. It is essential to know what a video is being used for. Is it just to provide knowledge and information or will it also raise attitudinal questions or demonstrate skills? Most purchased or loaned videos, i.e. videos from outside sources, will have been made to provide information and knowledge, though some will also address issues of attitudes and values, e.g. prejudice and discrimination. The main objective is likely to be public education, advocacy of a cause or entertainment. These videos will not have been made for training purposes.

Videos – Training Tips

Always test the equipment beforehand. If going to a new venue take a long extension lead.
Always watch the video before using it with a group. If necessary, select exactly which parts of the video you wish to show.
External training videos usually have instructions for use or training manuals or exercises. **These should always be studied beforehand by the trainer**.

Some videos are made specifically as training videos with some good examples in the field of management or counselling training. They will include knowledge and information and raise attitude questions, but their main emphasis will be on skills development. The best of these use drama or role-play to illustrate effective and ineffective ways of conducting interviews or non-verbal communication in a counselling situation. Trigger videos, which are short videos (under 10 minutes) designed to raise discussion, are specifically made for training situations.

Trainers need to ask themselves some basic questions before using bought or hired videos in their training.

- Will this video supplement or provide knowledge about a content area which is part of my training programme?
- Do I need to show the whole video or will one or more short sections provide what I need?
- If short sections will suffice, is it worth the effort to hire the video, ensure the equipment is in order, stop and start the video recorder, etc.?
- What are the advantages of a video over my own input in terms of knowledge acquisition?

Making your own training videos

If you have access to a video camera, it could be effective to make your own videos for training. But you should weigh the effectiveness in terms of the amount of effort/expense required to produce the video in the first place.

Examples of the kind of video you might make:

- a teacher in an early childhood centre is carrying out an ordinary day's work or is involved in a particular activity like story-telling
- a parent educator making a home visit.

Trainees would observe the video and comment on what occurs, remembering always to be constructive and to avoid personal criticism.

While many videos are intended to show the material they contain in the best possible light, a video that shows it 'how it really is' provides a more effective learning tool. It gives much more opportunity for comment and discussion. A good video should work as a substitute for expensive one-way screens or windows, showing everything that happens without the 'actors' being aware of the observer. Good training videos do not have to be long. A five minute clip which raises questions and discussions on a specific issue is better for training purposes than an hour's video with a more generalised approach.

Because videos are used mainly as a technique to observe the behaviour of workers and children and to capture the subtleties of interaction, the video should be of good quality. If trainers want to make their own videos, they need to develop the skills to be able to capture the most subtle non-verbal communication to bring out most effectively the learning they wish to occur. It

takes time to develop skill in using a video camera sensitively and effectively. 'Own-made' videos do not need commentaries: questions to help trainees focus on the learning points can be used instead.

To summarise, video can be a useful training tool for the following reasons:

- it can provide an effective stimulus for discussion
- observation can be controlled
- every picture contains a multiplicity of themes around the subject in hand
- unlike photos, video shows process and progress
- it captures moments of reality that otherwise go unnoticed and cannot be recaptured
- it affects two senses (sight and sound)
- it is re-usable and re-cyclable
- certain externally made videos can bring realities to the attention of trainees which are not accessible to them in real life
- video can demonstrate skills by using either negative or positive images or both. It can show an action/interaction being carried out wrongly/ineffectively or correctly/effectively.

Making your own video – Training Tips

To make your own video always takes longer than you expected.
It is often much easier to get good pictures than to get good sound. If sound is important then a great deal of care is needed with the placing of microphones and the avoidance of extraneous sound.
Even videos with poor vision and sound will be fascinating for people who participated in its making. If trainees or children on a project have been involved in its making, or appear in it, they will usually watch with great attention.
The permission of everyone seen on the video must be obtained, both to video them and for the way the video will be used.

A few words of caution

- There is a danger that content of a video having a particular cultural context may be misinterpreted
- Video requires careful and thorough preparation. The trainer needs to choose videos carefully and assess what information and skills the trainees will actually get from the video, what additional knowledge is needed and how it links with the rest of the training. A video is only as good as the trainer using it!
- Video is unacceptable in some cultures and to some individuals.
- Strong audio or visual images can inadvertently distract trainees from the main message the trainer wishes to transfer.
- A video shows only a limited part of the whole and therefore is open to misinterpretation.

- The presence of a camera may make the situation unreal.
- Infrequent use of video may give it a glamour or rarity value which distracts from content.
- If video is used to demonstrate negative actions/interactions, then positive/effective interactions should also be shown either on video or through role-plays or other methods. Otherwise the negative image may remain in the minds of trainees.

Evaluation of activities

We have presented many individual methods that include their own evaluation. These methods encourage the trainer to sum up the learning points after discussion and also to seek the views of the trainees on their experience of the activity and what they feel they have learnt from it. **Has learning been achieved is the vital question?** Evaluation of training courses will be addressed in the next section.

A critical look at training

Experiential/participatory training emphasises the processes of questioning and challenging

Experiential/participatory training emphasises the processes of questioning and challenging rather than passive acceptance of what appear to be definitive answers. This is one of the most important aspects of this approach.

In this section, therefore, we take this aspect a step further. We suggest that trainers look closely and in depth at the training in which they are involved and then challenge – and ask questions of – themselves. While this can be done on an individual basis, it works even better if another basic tenet of experiential/participatory training is followed: co-operative work and learning. Questions can be discussed in training team meetings and with trainees.

Many of us have found ourselves working for some time in a training situation with no reason – or opportunity – to ask ourselves fundamental questions about the training. This is an all too familiar position that often produces a feeling of staleness. While things change, new sets of trainees arrive periodically, neither the syllabus or our way of teaching changes very much. The result is that we want change – but have no really urgent reason to initiate it. We continue to get good assessment or examination results, our trainees don't seem to complain, and we are far too busy to stop and look hard at our training as a whole.

No matter how successful we seem to be, we all need to stop from time to time. Therefore, this pack encourages you to think about making changes. The questions below may help you deepen your experience by thinking about your training and your role as a trainer.

Note that we make no distinction here between pre-service and in-service training. The ideas and philosophy of experiential/participatory training are broad enough to apply to everyone involved in working with children and families, whether working directly in the field or training others to work more effectively.

● Looking at my training in general

Questions trainers could ask themselves

Why do the trainees I work with need/want training?

Some possible answers:

- because everybody needs training
- because they want to learn how to work with children and families
- because they want to extend their skills or develop new skills in working with children and families

- because they have all been excellent workers in the field but now want to make progress in their careers by acquiring different skills in order to train others
- because they need more and different kinds of theoretical knowledge to become trainers
- because the Ministry of Education won't give them approval or pay them to work with children and families – or train others – without approved training.

What are they being trained for?

- What should these trainees be able to achieve and how should they behave when they have finished their training? What are the objectives/outcomes of training?
- Am I giving enough attention to the trainees' values and attitudes? How does this affect their understanding of information?
- Am I giving them opportunities to identify their own and others' attitudes? What attitudes do I want them to develop?
- How do they think grass roots workers should work with children and families?

Who is involved in the training process?

- The trainees
  - What do I know about them?
  - What are their strengths and weaknesses?
  - How do they view themselves, their previous experience, their present lives?
- Other trainers
  - Does my course/contribution fit in with those of my colleagues?
  - Do our contributions reinforce each other?
  - What training methods do my co-trainers use?

When/where/how long is the training?

- Is it or will it be held at a time that is as convenient as possible to all participants?
- Has thought been given to balancing issues like use of premises, availability of trainers, etc.?
- What about the location of the training? Is it suitable for residential or non-residential training – or both? Are practice placements available?

Questions like these can only be answered when we have answered the previous questions about who the trainees are.

What?

- Knowledge areas
- Skills areas
- Attitude areas

Am I covering all three dimensions sufficiently?

While most trainers are competent in working out the objectives of their training, often the objectives are viewed in terms of knowing and doing (skills), leaving out the vital areas of attitude and understanding.

How?

- How am I training? What method am I using?
- Do my methods provide opportunities for all the learning objectives to be achieved?
- What is the balance between theory and practice in my training? Is this balance right?

All these questions are useful when planning training courses, as well as assessing ongoing training. They should be frequently re-addressed for ongoing and regularly repeated training.

● Looking at myself as a trainer

For this exercise, it is useful to consult part 4 of the pack.

Am I a traditional teacher/trainer or am I a facilitator?

Make two lists:
a. Characteristics of a traditional teacher/trainer
b. Characteristics of a facilitator

Looking at the two lists, which of these two descriptions fits you best?

If you do not fit clearly into either category, you need to decide whether you want to be more – or completely – facilitative.

If you decide to become more facilitative, make a list of the facilitative methods you already use in your training (see the methods described in the previous section), and how often you use them. Some trainers think they are working in a facilitative way because they always follow a lecture with questions and discussion. However, in this situation the same few trainees often develop their understanding by asking questions and joining in discussion. The other trainees, maybe lacking confidence, remain silent.

You can gradually build up your repertoire of facilitative methods by trying to include one unfamiliar method at a time. Start with the one with which you feel most comfortable.

Looking at practice as a key component in training

Practice is an essential component of all long-term training courses

This pack emphasises the importance of practice in training. Practice is an essential component of all long-term training courses. Even short workshops often include field visits to early childhood centres, for example, where participants may be asked to observe children or assess the quality of the provision.

To improve training, it is important to take a close look at the place of practice in training and find ways to build training round practice. The following series of questions enable trainers to examine their views on practice in training.

1. What is the purpose of practice in training? This question should be viewed in terms of the personal and professional development of trainees.

2. Is there a clear relationship between practice and theory in my training? Does the practice reinforce the theory or does the theory illuminate the practice? Whatever the answer, how is this effect achieved?

3. Where is the practice period placed in my training? Does this help to ensure its effectiveness in relation to theory/practice?

4. How could you build on the 'natural' practice, past and present, of your trainees? Your adult trainees have a great deal of knowledge and skills concerning parenthood and sibling relationships. As you are dealing with the content area of child development, they have a great deal of relevant experience to offer.

5. What kind of practice do I arrange for my students? In in-service training do I ever offer opportunities for supervised practice in their current work situation? What are the advantages or disadvantages of this?

6. How much time do I give to practice in relation to the training as a whole, and how is it arranged? Do I give one day, one week or a block period half way through the training? Or a block period at the end of the training? Your answers will help indicate the degree of importance you attach to practice in training. It will also indicate how it fits in with the rest of the training.

The participants in the Workshop referred to in the Acknowledgements worked out the steps that should be taken to make practice effective. This applies to specially arranged practice as well as a trainee's supervised or assessed practice in his or her own working situation. It would be useful to look at this scheme (page 27) to determine whether you are making similar steps or whether inclusion of these steps would improve the effectiveness of practice in your training.

Steps in promoting the effective use of practice in training

1. Preparation

• Diagnosis. The analysis of needs and the experience of trainee (a joint exercise of trainer and trainee).

• Identification of child development issues such as health and nutrition, play, language development opportunities, etc., which relate to the community in which the trainees are or will be working. This can be done as part of a group discussion.

• A profile of the community could be developed by trainees or groups of trainees. This could include the number of children under six years, work patterns, child rearing practices and any services available for children and families.

• Particular attention could be paid to the identification of local songs, dances, riddles and stories.

• Some time could then be spent in developing ways of using these media to convey child development messages.

2. Identification of practice opportunities

At different points in the pack we have discussed the importance of valuing the work experience of trainees who are being trained in an in-service training programme. We need to think whether there are any strong reasons why the trainee should not carry out the practice part of the in-service course in his or her own work situation. The trainee can be supervised and assessed in the same way as he or she would be if a different practice placement were arranged. You might wish to make lists of the reasons for and against placing a trainee in his or her own work situation for supervised practice.

When training trainers, we need to remember that an appropriate practice situation will offer opportunities to practice the trainer role. It will also provide experience of the roles to be undertaken by their future trainees. Trainers themselves may also need some direct work with children and parents.

If opportunities for sharing the practice experience with other trainees are built into the training, it is not necessary for all trainees to have practiced everything. For example, in a pre-service multi-disciplinary child development training, a trainee might be placed for his or her practice in a pre-school centre, while another might spend time with a home visitor who works with children and parents in their own homes. Yet another might spend time with a village health worker. In all cases work with the children themselves and their families should be included.

3. Working out aims and objective of the practice

• This should preferably be done by a group of three – if possible and appropriate. These are: the trainer, the trainee and the practice supervisor. The latter might be the headteacher at an EC centre or an experienced health worker/parent educator – the person who is actually responsible in the trainee's own practice work situation.

• The role of practice supervisors should be made very clear to all involved in the practice.

• The team of three should clarify their learning objectives in terms of knowledge, skills and attitudes and this should be put in writing.

• The trainee's levels of responsibility should also be clearly defined. For example, in a centre-based practice, the trainee should have opportunities to observe as well as teach. Practice in training might consist of observation of an experienced trainer, co-training with a trainer and taking personal responsibility for preparing and carrying out some training sessions.

4. Debriefing/evaluation

Opportunities to reflect on the practice are probably the most important learning aspect of practice. Therefore, regular review of the practice, on an individual and group basis, is essential. Even if a block period of practice is the chosen approach, then some way of ensuring regular review of practice needs to be found.

5. Points of caution

• If links between theory and practice are not made by trainers, trainees may see the two as entirely separate.

• Child development theory should only be put into practice with reference and sensitivity to local cultures.

6. Role of the facilitating trainer

• Negotiating with the trainee at all stages.

• Support for the trainee, showing understanding of the trainee's fears and lack of confidence in relation to practice.

• Stimulation of the reflective process before, during and after the practice period – by using questions to challenge and create links between theory and practice.

• Provide theoretical inputs and information at the appropriate time (see 'Methods to promote experiential/participatory learning').

Looking critically at aspects of the child development curriculm

Turning to the theoretical part of training, we want to look at two traditional training curriculum areas, Play (Toymaking) and Reading & Language Development, to determine whether it is possible to deal with these areas in a more participatory way, using the trainees' own experience at the same time. Both examples have connections with the Foundation Workshop referred to in 'Acknowledgements'. The section on Play was developed during the Workshop, the section on Children's Literature (as part of Reading and Language Development) was developed by Samira Nairukh, one of the participants at the Workshop, on her return to Jerusalem. It is based on the approach she used in her training of trainers course for Arab trainees at a college in Israel. It demonstrates the participatory approach and the use by trainers of trainees' personal experience as a contribution to learning.

On their return from the Workshop, most of the participants looked for opportunities to apply their new learning to their training activities back home.

Play

Play is an important component of the Child Development Curriculum (see Guide to the Development of the Young Child). Play helps babies and children to grow, learn and explore, to practice language, develop physical and social skills and come to some understanding of adult roles. While play does not always involve toys, toymaking as a part of training can be a most effective way of conveying the importance of play to trainees.

Toymaking has become a standard part of much of the training in child development in developing countries. This is because home-made toys are as developmentally effective for children as commercially produced toys which are, in any case, often beyond the means of disadvantaged communities. Also important, toymaking is a creative experience in itself. While toymaking is often used, its importance as an example of experiential learning is often overlooked. To be effective, the process requires careful structuring.

Trainers might ask themselves:

- How do I explain the connection between toymaking and child development?
- How can I ensure that trainees are encouraged to use their creativity when making toys?
- Could a well-planned toymaking session (including preparation, execution and follow up) replace lectures on play as part of child development?

The structure on page 29 is suggested.

Toymaking as an example of experiential, participatory learning in training

Purpose

• to learn about aspects of child development through a practical experience

• to understand the purpose of play through making toys

Preparation

• trainees collect any materials available in the environment, including natural objects and trash materials

• trainer and trainee together provide a format to enable the trainee to describe the toy being made and its relevance to the child's development stage. Headings might be:

- age of child for which it would be appropriate
- possibilities for development at this stage
- purpose of toy in terms of developmental needs
- material used
- method of making
- the trainee's views of the experience in terms of the learning derived from it.

Steps

• Discussion with the group of trainees of the ways in which the child develops at the stages under consideration, eg. baby, infant, toddler, pre-schooler.

• Make a list of the developmental changes occurring at that stage in all dimensions: physical, social, emotional, intellectual and language (see part 3)

• Brainstorm a list of types of toys that would promote the different dimensions of development at the specific stages.

Examples:

- soft toys (allowing for expressions of positive and negative emotions)
- toys that make a noise (hearing development and fine motor coordination)
- toys that develop language (puppets)
- toys that encourage social interaction (card games)

Give some thought to the next developmental stage so that toys can be made to extend the child (see part 3)

• Draw on the creativity of the trainees. Ask them to come up with specific ideas for toys which can be made for a particular age group

• Ask each trainee to select the toy he or she is going to make. Being able to make a choice encourages the creativity of the individual trainee

• The trainee next provides a written description of the toy in the format developed in the preparatory stage.

• It is up to the trainer to ensure that the toys will cover a variety of dimensions of child development across the group

• Each trainee makes a toy, using natural materials found in the local environment or from waste materials

• The trainee group should have an opportunity to play with the toys at some point and give feedback to the toymakers

• It is important that there is a practice situation – a home, school, or childcare centre where children can be observed playing with the toys

• Before this observation session trainer and trainees need to work together to develop a checklist:

- what to observe in the way the child plays with the toy
- how trainees should interact with the child to facilitate learning from playing with the toy
- how can the trainee extend the child's learning beyond that particular toy
- how can the trainee use the opportunity to educate other caregivers, including parents, in the value of play?

• Follow up the practice situation with reflection and discussion in the group on the value of toymaking as a learning experience.

Point of caution

Toys should be safe, well-made and strong. They should also be colourful and if possible of different textures. Above all, they should represent indigenous images.

Reading and language development

The three columns on these two pages contain an example of experiential/participatory learning in training based on children's literature.

Goal

- to recognise and examine books for the young child which are developmentally appropriate.

Purpose

- to distinguish and choose (and/or make) a book for a child of three years.

Pre-exercise for the trainers

- think how you would explain this subject to the trainees in order to achieve the above purpose. Suggest some ways of doing this before reading the suggested activities.

Suggested activity No.1; Time: 60 - 90 minutes

Preparation

1. Gather together a number of children's books suitable for a child of three
2. Prepare question cards (examples below) which are based on theories of children's literature for the first three years
3. Collect (and ask trainees to collect) second-hand magazines to make children's books

Examples of Question Cards:

- Your child needs love and security and you (mothers, parents, sisters) are the source of these needs. How do these books help your child to grow emotionally?
- Your child is mainly familiar with concrete objects in his or her own environment: clothes, food, toys, favourite things. How many of these objects can be found in the book?
- Your child is very curious and wants to explore everything. How does this book satisfy his or her needs?

Steps

1. Introduction - read a child's story book to the trainees.

2. Organise the learning environment:
   a. Divide the group of trainees into small groups
   b. Distribute the question cards
   c. Distribute the children's books

3. Discussion in small groups (20 - 30 minutes)
   a. Reading the story books and/or showing the picture books
   b. Discussing content of the books, using the question card for guidance
   c. Writing notes and ideas
   d. Deciding which children's books are best for the relevant age

4. Discussion and conclusions (full group, 20 - 30 min).
   a. Trainees discuss and exchange ideas and comments
   b. Trainees list desirable characteristics in children's books for the first three years

Role of facilitator

1. Prepare summary of developmental characteristics of the child at the age being addressed

2. Prepare question cards

3. Gather together children's books with different themes and styles

4. Introduce the session and read a children's story

5. Introduce the activities and sum up the session, relating the results to the pre-prepared list of developmental characteristics

Each of these two examples – Play (Toymaking) and Reading and Language Development (Children's Literature) – demonstrates the possibility of drawing on the experience of trainees and using participatory methods in child development training. We suggest you try to work out similar schemes regarding other aspects of Play and Language Development and for areas of the child development curriculum not covered by this pack. The principles at the beginning of this section will serve as a check-list for your planning.

Parent/Family involvement

A. Pre-exercise: trainees obtain the views of parents about books for children. This can be done either in their own homes or in a parent's group in the early childhood centre.
B. Post-exercise: trainees share with the parents their conclusions about children's books and make some suggestions for books which will be developmentally suitable and effective for their children – and why this is so.

Evaluation

Each trainee selects a child's book which has not been reviewed in the exercise. This book is to be analysed and evaluated in terms of the learning from the exercise.

Further study

Each trainee selects a book and plans how to use it with a young child. He or she then carries out the plan, recording and analysing what happened. A report is presented at the next training session.

Difficulties

- Shortage of books.
- Shortage of suitable books.
- Illiteracy of parents/grass roots workers.

Suggestions

Organise a workshop to make different kinds of picture or story books from old magazines.

Recommendations

1. You need continuous activities to help trainees reinforce knowledge and acquire additional skills related to literature and language development.
2. Role-play activities can be organised to help trainees practice ways of developing language skills in young children.
3. Observe young children as they listen to stories and look at picture books. Follow by discussing with them their responses, degree of attention, non-verbal expressions, any questions they asked, etc.

A critical look at training evaluation

How do you evaluate your training course?

Possible answers:

- By determining how many trainees on my course complete their course work and/or pass the exam at the end.
- If I have managed to cover all my syllabus during the course.
- By keeping an evaluative record of my own contribution to the learning in each session.
- By seeking feedback during or at the end of the course from the trainees on my role and their own learning.
- By evaluating the course together with all colleagues who are contributing to it, during and after the course.
- By some other means.

All these methods – coursework assessment, examination results, self-evaluation, trainee and peer evaluation – are important in formative evaluation: monitoring how the training course is or is not progressing. They are also important in summative evaluation: deciding whether it is deemed successful at the end. Remember that evaluation of training, in fact evaluation in general, is easier if learning aims and objectives are clearly worked out and agreed beforehand.

At the end of the course, as a trainer you need to know whether:

- the agreed learning objectives have been achieved
- the trainees have found the course stimulating and enjoyable
- the course has provided trainees with learning which can be applied to their work and their lives.

Contract-setting

You can evaluate your training and at the same time ensure that you are in line with the principles underpinning this pack by entering into a contract with your trainees at the beginning of the course. This is one of the best tools for evaluation.

As you discuss their hopes, fears, aspirations and experiences with individual trainees at or before the beginning of the course, together you can work out an individual contract. This should be based on the course as you have planned it and on the individual needs of the trainee. In the case of a trainee, you can inform him or her about:

- the way different parts of the course are assessed
- what he or she has to do in terms of course work
- what kind of practice he or she will be expected to do
- how much time will be needed for private study/preparation
- how much personal supervision (tutorials) and other forms of support can be expected.

The trainee can share his or her learning goals in turn:

- any learning difficulties that he or she is aware of
- any personal situation which limits his or her time to study
- any personal situation which limits where he or she might do his or her practice
- where he or she thinks his or her strengths lie.

A contract is now emerging. It consists of the trainee's commitment to fulfil the terms of the course and his or her own learning goals. It also consists of a commitment by the trainer to take the trainee's individual needs into consideration. The contract should be put in writing and signed by trainer and trainee. It should also have a time limit, i.e., a term or, if necessary, a year or less. The contract thus provides a benchmark to evaluate whether the trainee is making progress.

Self assessment

Each of the different methods we have discussed had a form of evaluation built into it, usually through the trainer's questions about the trainees' feelings and actions and what had they learned through the activity. Similarly, the habit of **keeping daily/weekly recordings or diaries** is a useful form of evaluation for both trainers and trainees. For the trainee it could be a simple recording of what happened during one day and/or one week, including some analysis of what was learned and a self-assessment.

The trainer can keep similar recordings, assessing his or her own performance but also noting where individual trainees made progress in understanding, skills or attitude change – or failed to make such progress.

Peer assessment

constructive criticism helps improve training by giving coherence to trainees' learning

Trainers can obtain peer assessment through joint evaluation of courses with contributing colleagues. Constructive criticism helps improve training by giving coherence to trainees' learning. Naturally their learning crosses the boundaries of individual courses. Trainers might look at the possibility of placing two trainees together in a practice situation and encouraging them to work together, for example, to run an activity in a pre-school centre or take responsibility for a training session for health workers. The trainees may decide to co-lead or to take turns to either lead or observe. At the end of such sessions, they can feed back their observations of the process to each other to evaluate how they worked. If feedback is to be constructive rather than personal, a great deal of preparation is needed.

Feedback from trainees

One way trainees evaluate their training course is by 'voting with their feet'. This ranges from detaching themselves mentally from what is going on in the course, or detaching themselves physically by frequently arriving late or absenting themselves altogether. But there are more constructive ways of obtaining feedback from trainees. A simple way is to use the first session of the course for trainees to share their hopes, needs and expectations of the course. If this is written up on a flip chart or piece of paper, it can be retained throughout the course. Progress on achieving aspirations can be measured periodically and appropriate adjustments made. At the end of the course the chart is there for a final evaluation.

Trainers could also provide an evaluation sheet to be completed by trainees. This can be either a structured questionnaire or an open questionnaire. The following examples with some modifications are taken from 'Promoting Active Learning' by Penny Henderson.

Long term evaluation

A course has been effective if the learning from the course is retained and expanded on when trainees return to the real world of jobs and families. Some trainees may come back and tell you that the effectiveness has been long term. However, if you want a more objective test, consider involving post-graduate students.

Post-graduate students, particularly in education or the social sciences, frequently look for research projects for their Masters and PhD degrees. Such a student may wish to discuss one of your training courses with you before it starts and to monitor its progress. They may want to interview you and your trainees before, during and after the course and follow up the trainees once they return to their work situation. An evaluation by a post-graduate of the effectiveness of your training could help you to improve and enhance your courses. This is, after all, what evaluation of training should be about.

Structured questionnaire: evaluation of trainers' course

1. **Please note where you think you now stand for each item on the list below**

	not met	partially met	substantially met	fully met
Can identify training needs				
Can plan a programme				
Can set learning objectives				
Can choose appropriate methods				
More confident about at least one new method				
Can evaluate my skills as a trainer				

2. **What do you still think you need to practice in training sessions?**

- Planning?
- Setting up?
- Running?
- Evaluating?

3. **How did the trainers help you to learn?**

4. **How did the trainers hinder your learning?**

5. **Which session(s) did you find most enjoyable/useful?**

6. **Which session(s) did you find least enjoyable/useful?**

7. **How satisfied were you with your performance on the practice presentation?**

8. **When will you plan to do your first training session (if you need help to do so, who will you ask?)**

Open questionnaire: child development course evaluation

Name

Review what you wrote about your reasons for wanting to participate in this course, and what you hoped to get out of it.

1. Have your learning aims changed as you've done the course?

2. What would you say has been good about this course?

3. What would you say has needed improvement about this course?

4. Give your comments on the style and methodology of the trainer in this course. How did they help or hinder your learning?

Our plan for change

We have discussed evaluation processes and in particular the idea of contracts between trainers and trainees. We now suggest that you make a contract with yourself. This is a good way to change your training methods. The contract will spell out the changes you will try to make, whether they are small, such as trying out one or more of the ideas in the earlier section, or larger changes, such as redesigning your plans for practical work or sitting down with your colleagues to redesign your entire training. If your imagination is stimulated, perhaps you can invent participatory activities in the area of Child Development.

We hope that this pack has encouraged you to make some changes. We also hope that you will share any of the changes you make with us, whether successful or not, recognising that we can learn from failure as well as from success.

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2 Delivering effective training

The practical focus of the pack

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Guide to the development of the young child

Bernard van Leer Foundation/UNESCO

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We must use plain words
and display such goodness
or purity as we have
at the bottom of the pot.

Montaigne

USING THIS TRAINING PACK

This Training Pack is intended to persuade, not to prescribe. We want readers and users to take from the Pack whatever fits comfortably with themselves and their work, to use the suggestions if and when it suits them, and to be creative in adapting the ideas to their own circumstances and inventing new ones.

The Pack can be used by individual trainers or by groups of trainers. It will probably be most effective if a group of trainers meet together to discuss issues raised in the Pack and try out the activities. It can also be used by individual trainers as a selflearning pack.

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Notes on language:

Throughout this guide, we use the terms 'family', 'parent' and 'caregiver' in a broad sense. As parenting arrangements vary enormously around the world and even in a given society, readers should interpret these terms in the light of conditions prevailing in their own community and larger society.

Pronouns in the English language are either masculine or feminine. To avoid awkward constructions such as 'he/she' when referring to a child, we have used the masculine pronoun throughout the main text. To preserve balance, however, we have used the feminine pronoun in all the summary boxes.

Notes on layout:

The reader will find summary boxes throughout the text. These include: Developmental Health Watch, Milestones and What Parents Can Do. We hope that these summary boxes will prove useful for trainers.

Important terms are indicated in bold in the text on first mention, together with a short definition. In some cases, as appropriate, these terms may again be indicated in bold. Sections in italics and otherwise highlighted are intended to be brought to the attention of trainees for discussion and action.

1 Introduction

Why study development

Nothing is more fascinating than a child's early development and the many factors that can support or slow down a child's progress. Change and growth occur more rapidly at this time than at any other period in life. This is because the infant, who is in the process of first becoming a toddler and then a pre-schooler, must acquire – and learn to use – an enormous amount of information.

Child development is not the same as growth. The term 'growth' refers mainly to changes in size, while 'development' is characterised by changes in complexity and function. Early childhood development (ECD) refers to the formative years of the life cycle – the first six years of life. Child development involves change from immature to mature behaviour and from simple to complex patterns of behaviour – in short, the evolution of a human being from a dependent child to an independent adult.

Child development is a process of change in which the child learns to handle more complex levels of moving, thinking, feeling and interacting with people and objects in the environment.

To better observe and understand the child's behaviour, development is often divided into four different categories:

- a physical dimension (the ability to move and co-ordinate)
- an intellectual dimension (the ability to think and learn)
- a social dimension (the ability to relate to others)
- an emotional dimension (the ability to develop positive feeling for self and others).

Although all children grow and develop according to the same general pattern, they differ greatly in their rate of growth and development. They also differ in the ages at which they are capable of performing specific tasks or actions.

Developmental changes usually have three characteristics:

- **orderly** – occurring in a sequence or series
- **directional** – showing some kind of accumulation or organisation of skills, each change in a sequence building on the results of preceding changes
- **stable** – effects remaining for more than a short time.

The following table highlights examples of three developmental sequences: in language and in emotional and motor development.

Three Sequences of Development

Language Development	Emotional Development	Motor Development
Babbling	Smiling at eye-to-eye contact	Lifts head when lying on stomach
One word utterances	Distress at separation from mother	Rolls over
Two and three word utterances	Using the main caregiver(s) as a secure base from which to explore the immediate environment	Sits without support
Multi-word adult-like sentences		Creeps on hands and knees
Sentences with relative clauses	Temper tantrums when the child is thwarted in attaining a goal	Pulls self up to stand
Reading sentences		Walks
Writing sentences	Spontaneous fear of 'monsters'	Runs easily
Composing a brief essay that describes a sequence of events	Forming a special friendship with a 'best friend'	Hops and stands on one foot
Composing an essay that presents an argument	Desiring acceptance by a particular peer group and fearing rejection by the group	Skips easily

The study of development helps us understand how children's behaviour influences the people and objects in their environment and is in turn influenced by them. For example, a child may be friendly and outgoing to new adults who come to his home but shy when he meets strangers outside the home. Behaviour often depends on context.

Context includes not only the immediate situation but also aspects of the larger setting in which people live: the extended family and the neighbourhood, the cultural group and the socio-economic group. Such settings are sometimes described as the **ecology** of the child's behaviour. They influence development by creating opportunities that stimulate different behaviour and by affecting the way in which the children's environment responds to their needs and demands.

culture is defined as a body of learned meaning and shared information transmitted from generation to generation through interaction

Culture and parenting

Cultural variations in child-rearing influence children's mental, emotional and social development, just as such variations determine which language a child will eventually speak. Parental approaches to child-rearing in different cultures are similar in some ways but different in others. Parenting is a principal reason why individuals in different cultures are who they are – and why they often differ from one another. The cultural contexts in which children are reared constitute a central but often neglected factor in early childhood development studies.

How do children become members of their culture, given the behaviour, language and physical surroundings they experience? At the very heart of the concept of culture is the expectation that different peoples possess different values, beliefs, motives and behaviour. Parents and other caregivers must prepare children for the socially accepted physical, economic and psychological circumstances of the culture in which they are to survive and thrive. This is a long-term task.

> *In essence, culture determines the structure and nature of the social and physical environments in which the individual is reared and which in turn influence the course and outcome of development.*

In the discussion of parents and cultures, **one significant theme is the question of culture-specific versus universal parenting activities.** We see examples of diversity as well as uniformity in cultural approaches to parenting. **A second theme involves the relationship between cultural beliefs and behaviour. In what ways do beliefs influence behaviour – and vice-versa?**

The definition of parenting provides a third theme. Different cultures distribute caring responsibilities differently. In some, mothers are the principal carers of children. But in other cultures, multiple caring models are more common. In these several people share responsibility for the child. In fact, in some cultures multiple caring arrangements are so common that they are more significant in children's lives than the influence of their own parents.

Culture is defined as **a body of learned meaning and shared information transmitted from generation to generation through interaction.** With culture defined as a body of organised information, parenting consists of mechanisms for transmitting that information, and childhood of the mechanisms for processing it. Both parents and children select, edit and refashion cultural information. What is exciting is the way that adults and children both play active roles in the process of acquiring culture. It is a two-way process, not just a matter of parent giving and child receiving.

In every society, parents are concerned with caring for children and preparing them for the culture.

> *Without paying attention to culture, we cannot fully understand the basics of human nature, whether in terms of motor control, language acquisition or emotional expression. Without culture, our view would be short-sighted and ethnocentric.*

Because we all belong to the same species, we share a common biological heritage and therefore a common developmental script or pattern. For example, we all walk upright, and most of us begin to speak when we are between one and two years of age. We have a long childhood during which adults must care for us and teach us.

This biological heritage is passed genetically from parents to children by a set of **genes**. Genes help to determine our form and physiology as well as some of our behaviour.

Species-specific behaviour refers to behaviour in which genetic factors play an important part. For example, all members of the human race share certain genetic factors. Nearly all of us crawl before we walk and we walk on two legs. We all jump when surprised by a loud noise and blink when an object suddenly appears before our eyes. We all smile, cry, love and hate. Assuming normal development, we all develop language. We all learn. In fact, the tremendous learning capacity of the human being makes our behaviour much more varied and flexible than that of other animals.

Take human language: this is a remarkably flexible species-specific behaviour. While all birds in a single species develop essentially the same call, human beings have the capacity to learn different languages. It is our genes that give us the capacity to learn a language, but it is the child's specific environment that determines which language is spoken.

all human beings share a biological heritage that gives us the same basic physical and mental design, as well as a range of species-specific behaviour and a predictable life cycle

Our biological heritage also gives us a common developmental script – the human life cycle. This life cycle is the starting point for the scientific study of development. We all pass from infancy into childhood. We undergo changes at puberty and pass into adulthood and then old age. All human beings share a biological heritage that gives us the same basic physical and mental design, as well as a range of species-specific behaviour and a predictable life cycle.

In addition to our common genetic inheritance, we share a common environment – a **species-specific environment** for the human species. We all need to breathe air containing oxygen and to eat foods containing the same basic nutrients. We live in a world where things fall down, never up. We experience a daily cycle of light and dark, as well as an annual cycle of seasonal changes.

Because the human species is so versatile, we can live under a wide range of physical conditions, from the Arctic to the Tropics. But whatever the physical environment – snow, sand or mountaintop – certain aspects of the social environment are similar. For example, all societies use language to transmit cultural values and teach skills to their children and young people.

The long childhood that typifies our species probably accounts for the existence of the **human family**, another aspect of our shared social environment. The family is a universal human institution, though its exact nature varies greatly from culture to culture. In all its many variations, the family serves basically the same child-rearing functions. It cares for the infant and young child so that

A Perspective on the Young Child's Development

In order to support the potential inherent in young children's development, it is essential to understand the meaning of development and the factors that influence change. No single theory of child development wins agreement from all experts. Nevertheless, several general assumptions have evolved. These are derived from many disciplines, theories and years of working with young children.

A child's development is complex. It is determined by multiple factors from the very beginning of life. Development includes language, mobility, cognition and the organisation of experience as well as psychological, social and emotional growth. These aspects of development are not independent or isolated. They are interdependent, interacting with one another in ways so complex as to challenge our ability to capture them fully.

Characteristics of the infant at birth are subject to environmental influences. These influences can support, facilitate or impede development. The infant's characteristics at birth include a shared, species-specific biological heritage, the infant's unique genetic make-up, the conditions of life in the womb, the health of the mother and events during and immediately following labour and delivery.

The most significant environmental influence on the infant and young child is the quality of the nurturing environment, which is largely determined by the individual and collective capabilities of the child's caregivers. We cannot understand or properly assess young children unless we view them within this broad environmental context.

The influences of society and culture are, in the early years, mediated primarily by parental figures. Parents interpret the world to their children through both direct and indirect means. Parents in turn are greatly influenced by their own life experiences. The extent to which stress on the family from any source, internal or external, impinges on the young child will be a function of the caregiver's ability to cope with stress and to make use of supports that can buffer this stress. In other words, to understand a child, we must take into account the stress on the child's caregivers and the support available to deal with that stress.

The family's unique role, function and vital contribution to the development of the child must be fully recognised. Parents and other family members serve as sources. From them the child experiences nurturing, learns to love others and becomes a responsible member of society. To be effective, programmes must fully recognise the importance of the caregiver's role in developing the child's strengths and adaptive capacities. The vulnerabilities and difficulties of caregivers must also be recognised as well as the frustrations often implicit in the role.

Just as children undergo a process of development, parenthood itself can be conceptualised as a developmental and adaptive process. New parenthood with all of its joys and tribulations is a major turning point in life. As parents assume new roles and responsibilities, their attitudes and behaviour toward their child are influenced by many factors: their own experiences as children; the current realities of their lives; the support they receive from each other, service providers, and their social system.

Those who are privileged to work with parents must keep in mind that they are never equal partners with parents. Professionals may provide substantial and sustained services, but parents retain most of the responsibility for caring for their children. So, parental participation and opinion must be valued and utilised at all times.

In addition, professionals must seek to understand how their own cultural values and expectations about family life influence all their interactions with families.

he or she can survive to adulthood. It also ensures that children are socialised and educated, learning the ways of their culture and the skills they need to get along. While these shared experiences and our common biological heritage illustrate the unity of human life, the study of individual differences helps us understand the many forms and expression of human behaviour.

Studying the young child's development helps us understand the universal factors in developmental stages and the environments that support these changes. It also helps us explain the traits and behaviour patterns that distinguish one child from another. For example, some infants cry loudly when their mother leaves the room while others continue to play happily. Some children learn mathematical concepts quickly while others find them difficult. **Information about individual differences helps us create effective and stimulating learning environments tailored to a child's specific needs and talents.**

The statements in the box summarise some of the basic assumptions about the development of the young child. These statements reinforce and support the information contained in other parts of this Guide.

Purpose of this Guide

This Guide seeks to present some current scientific knowledge about universal stages. These stages include certain patterns and processes that characterise the development of children from conception through the first six years of life. All children growing up in any culture go through these stages and are influenced by all the inherent strengths and weaknesses of the particular culture.

This Guide also seeks to suggest and provide skills and practices that can help parents and other caregivers enhance child development. In keeping with the theme of universality, these suggestions are meant to highlight some universal aspects of parenting, regardless of culture. In this age of ethnic diversity and multi-culturalism, it is worth pausing a moment to reflect upon what makes us all, children and adults alike, part of the same human family striving to create a better world – a world to protect and inspire our children.

in this age of ethnic diversity and multi-culturalism, it is worth pausing a moment to reflect upon what makes us all, children and adults alike, part of the same human family striving to create a better world – a world to protect and inspire our children

In reflecting on universality, however, we are presented with certain challenges. The first challenge is to adapt, modify and critique the universal aspects of each developmental period for our own agendas. The second challenge is to complement the universality of child development with information on the vast differences among children growing up in a particular culture at a particular time. In essence, we need to look at specific examples of how children influence and are influenced by people and objects in their environments.

While brief guidelines on the universal aspects of parenting have been suggested, we also need to recognise certain unique or traditional practices which for centuries have enhanced culture-specific behaviour. Those child-

rearing skills which may enhance or limit the child's potential also must be understood in the light of what we know about children's needs. Because we all bring knowledge and experience to our work, we regard the users of this Guide as contributing authors. Together we must embark upon a broader, more sensitive journey, a journey that will generate some deeper insights into the mystery of development.

The information contained in this Guide is presented in six chapters according to the chronological age of the child:

Chapter 2 Before birth

Chapter 3 The new-born child: the first month of life

Chapter 4 The infant: the first six months of life

Chapter 5 The infant: from six months to one year

Chapter 6 The toddler: from one to three years

Chapter 7 The pre-school child: from three to six years.

Each chapter discusses in practical terms aspects of growth, including care of the child. It also includes developmental tasks and achievements in moving, speaking, thinking, learning, feeling and behaving. The warning signals for each age period are highlighted as these should alert parents and other caregivers to signs of possible developmental delay. We also provide some suggestions for parents wishing to enhance the quality of their child's development.

Before moving to chapter 2, we outline some theoretical issues in child development.

Current theoretical issues

Anyone engaged in the study of children, whether as a scientist or as a practitioner, must be aware of certain fundamental tensions. Some of these relate to questions that have been discussed for centuries by philosophers, theologians and educators. There is no one right answer or perspective to most of these questions. Instead, differing points of view represent different assumptions about human nature and the interpretation of existing information.

This section highlights some of the major issues in development:

- what are the determinants of behaviour - environmental or biological?
- Is the child's nature active or passive?
- Is development continuous or discontinuous (small steps or jumps)?

- Does the child predict the adult (stability over time)?
- Is there consistency across situations?

These questions form the basis of the study of development as seen in Western culture. Many other issues will arise from differing perspectives on the child around the world.

Environmental or biological determinants of behaviour?

One of the most basic questions facing developmental psychologists is the relative importance of environmental versus biological determinants of behaviour. This question reflects the well-known 'nature versus nurture' debate. Some scientists believe that much of human behaviour is guided by our genetic make-up, physiological maturation and neurological functioning. According to this view, the universals of development, such as walking, speaking and responding to other people, can be attributed to inborn biological factors. Similarly, individual differences between children are attributed to genetic and physiological differences. These scientists might argue, for example, that individual differences in performance on intelligence tests are due primarily to genetic factors.

At the other end of the spectrum, some scientists emphasise the influence of the physical and social environment on development. They believe that children respond to the people and objects around them and that developmental changes result largely from **experience**. In this view, individual differences in intelligence scores are attributed primarily to differences in stimulation. Since opportunities to learn about the world vary greatly, the child's performance depends on his particular experience and circumstances.

most psychologists agree that both biological and environmental variables play a role in development

The extremes of the nature-nurture controversy have obvious weaknesses. In fact, most psychologists agree that both biological and environmental variables play a role in development. Biological factors are more important for aspects of development like learning to walk, while environmental variables are more critical for developmental tasks like learning to read. A task like learning to speak depends heavily on biological maturation but cannot occur without relevant experience and interaction with people.

Many students of development believe that biological and environmental variables cannot be separated or weighted. In fact, these two variables are seen to interact from the moment of birth. Scientists taking this approach, therefore, understand behaviour in terms of the interaction between the child and the environment.

For example, they may view an aggressive child as having been born with a biologically based tendency to be active or assertive. If his parents respond to his aggression either harshly or inconsistently, his tendency to be aggressive might increase over time. However, if the parents of an aggressive child use consistent and non-physical forms of punishment, then he might learn to control these biologically based aggressive tendencies.

In contrast, take a child with a different biological predisposition. He might be less likely to try hitting and pushing. Thus, a child's behaviour can be seen as a product of repeated interactions between biological and environmental factors.

Another group of psychologists emphasise what is known as the **cultural-context perspective on development**. They argue that the same biological or environmental factor may have quite different consequences for development, depending upon the specific context in which it occurs. In other words, the ways in which people organise their activities depends in part on the experiences of prior generations. This perspective thus suggests a third source – the culture of the child's social group – as an important contributor to development.

As we have seen, culture consists of patterns for living evolved from accumulated knowledge and passed on to succeeding generations. This knowledge is passed on in the form of language, beliefs, values and customs. It is also passed on in the form of physical artifacts, from pottery to textiles to jewellery.

Active or passive nature of the child?

Some psychologists believe children receive experience **passively**. Others consider them **active** in organising, structuring and in some sense creating their own worlds. Scientists who consider children to be passive believe that they are moulded by their external environment and driven by internal needs over which they have little control. Educators who regard the child as passive tend to support direct and carefully structured teaching methods.

if children have an inborn tendency to be curious, to explore their environments and to organise the resulting experience into their own mental frameworks, then efforts to structure learning, particularly in the early years of life, are likely to fail

Those who contend that children are **active participants** in the creation of their own knowledge take a very view different of learning. They believe that children learn best when allowed to explore and select their own learning materials and tasks. If children have an inborn tendency to be curious, to explore their environments and to organise the resulting experience into their own mental frameworks, then efforts to structure learning, particularly in the early years of life, are likely to fail. For they can rarely match and excite the child's interests and skills.

In comparison, a relatively unstructured learning environment offers opportunities for varied stimulation and maximum exploration. What the child does and learns depends on interests that come from within and match his level of understanding.

Is development continuous or discontinuous?

Do developmental changes occur **continuously** in small, gradual, cumulative steps? Or do they occur **discontinuously** in jumps that produce qualitatively new and different abilities? Consider an example from motor development. Babies typically begin to crawl some time during the second six months of life. At first they creep on their stomachs, then rock on their hands and knees, then finally lurch forward and start to crawl. Over time the infant's crawling becomes better co-ordinated, faster and more skillful. These changes can be termed continuous as they show a gradual improvement in skill.

However, standing on two feet and walking across the room require a completely different set of movements. The change from crawling to walking is not just a simple extension of crawling skills, it is a qualitatively different behaviour pattern – an example of discontinuous change.

Discontinuous changes are sometimes called '**stages of development.**' These stages differ qualitatively. That is, the underlying structure of behaviour or thought actually changes when a child moves from one stage to another. Stages of motor behaviour include crawling and walking while stages of thought (cognitive stages) refer to different capacities for thinking about the world. For example, a new cognitive stage seems to begin at around 18 months when children are able to represent objects in thought.

the age at which children reach a certain developmental stage varies tremendously, but they all go through them in the same order

It is important to note that developmental stages follow a set order: crawling always precedes walking. The age at which children reach a certain developmental stage varies tremendously, but they all go through them in the same order.

In looking at the notion of continuity of individual development, we must ask whether there are critical periods of development in the growth of children. These are periods when specific environmental or biological events must occur for development to proceed normally.

The existence of critical periods has been firmly established for some animals and for some aspects of a child's physical development. For example, if the newly formed sex glands of the human fetus do not produce male hormones at about seven weeks following conception, the development of a female is irreversibly set. But the strongest evidence for critical periods comes from studies of language development. **If children have not had sufficient exposure to language before the age of six or seven, they may never fully master any language.** They will not even be able to speak their mother tongue fluently.

Stability or change over time?

Is an aggressive two year old likely to be an aggressive adult? Does early separation from the family produce long-term feelings of anxiety about separation? Does early education produce lasting changes in intelligence? A positive answer to these questions implies that children's behaviour is reasonably stable over time. It implies that early behaviour and personal characteristics are good predictors of later behaviour.

A considerable amount of research has focused on this issue. However, the evidence is open to different interpretations. Some researchers stress a child's tendency to change while others emphasise a child's stability or sameness over time.

Opinions differ because some behaviour and some periods of development are more stable than others. In general, a child's behaviour tends to stabilise with increasing age. For example, intelligence scores in the first few years of life are not good predictors of later intelligence, but intelligence at age seven is a reasonably good predictor of intelligence in adolescence and adulthood.

Is there consistency across situations?

If a child is highly aggressive at home, will he also be aggressive at school? Is a child who is shy with peers also shy with adults? In other words, is a child's behaviour specific to particular situations, or does a child have traits that prevail across a wide range of settings? What determines behaviour – a child's own traits or a given situation?

Some psychologists emphasise consistency across situations while others stress the importance of situational influences. In keeping with their general emphasis on external influences, strong environmentalists stress the situational determinants of behaviour. They expect children to show little consistency across situations or stability over time unless the environment remains reasonably constant. Those who stress a biological basis for development and the internal characteristics of the child tend to expect both consistency across situations and stability over time.

Summary of current theoretical issues

We have discussed the five central developmental issues:

- the biological or environmental basis of behaviour
- the passive or active nature of the child
- continuity or discontinuity of development
- stability or change over time
- consistency across situations

These have affected and will continue to affect all thinking and research on children.

> *Since there are no right answers, each of us becomes a scientist as we continue to observe, understand and learn from the complexity and mystery inherent in the development of each child.*

As patterns of the young child's early development are described in the following chapters, these and other questions will recur. It is hoped that readers will develop a position, based on their own observations and insights, on each of these questions.

82

2 Before birth

Pregnancy

Conception

Conception is the process that begins when a male sperm cell, the smallest cell in the human body, penetrates the female ovum, the largest cell in the body. The sperm and the ovum unite to form the baby's first cell, which is called the **zygote**.

In the first 24 to 36 hours after conception, the zygote winds down the **Fallopian tube** to the **womb (or uterus)**. As it goes, it divides and doubles, first forming two identical cells, then four, then eight, and so on. By the third day it is a solid ball of 16 cells, called a morula. The **morula** enters the womb and fills with fluid, dividing again. It is now called the **blastocyst**. Cell differentiation begins as the inner cells of the blastocyst become the **embryo** and the outer cells the **placenta**. In the third or fourth week of pregnancy, the cell mass begins to implant itself on the uterine wall. The blastocyst is firmly implanted in week five. This marks the completion of the conception process.

It is conventional to regard conception as the starting point of human development. In fact, each individual can be viewed as a product of the evolutionary history of the species, reflecting the development of culture and society. In other words, the entire history of our species plays a role in shaping the course of each new human life.

In this view, development is propelled by the interaction between those forces that create order and structure and those that generate confusion and diversity. At the moment of conception, both these forces come into play. Order, or the way in which humans are alike, initially arises from the limits imposed by the pool of genetic possibilities. Diversity, arising through sexual reproduction, seeks to ensure that each individual will inherit a unique combination of genes from the common pool.

The embryo

The second, or embryonic phase, begins with implantation. During this phase, rapid cell division continues and more differentiation occurs. Some cells form a sac of membranes and the embryo floats inside in a liquid known as the amniotic fluid. The embryo is attached by the **umbilical cord** to the placenta, which develops gradually during the embryonic period.

Through the umbilical cord, oxygen and nutrition are supplied to the developing baby and carbon dioxide and other waste products are passed back to the mother. The placenta performs the functions of lungs, digestive system, liver and kidneys for the baby. It also acts like a protective barrier between the

mother's circulatory system and the baby's, filtering out some, but not all, potentially harmful substances.

By the fifth week, the embryo is about ten millimetres long. During this time, the cells differentiate into an outer, inner and middle layer. In the weeks to come, the outer layer develops into the skin, spinal cord, nervous system, sense organs and some of the glands. The middle layer develops into muscle, bone, tissues, blood vessels, and urinary and reproductive organs. The inner layer soon develops into other internal organs including the heart and the liver.

In the sixth week, the embryo has developed from a flat disk into a round form. The heart has formed and now supports a rudimentary circulatory system. The two distinct hemispheres of the brain appear in a very primitive form. The head and trunk have formed, and the jaw and mouth are developing. The embryo does not yet look human, but is recognisable as a mammal. By the seventh week, the limb buds develop rapidly. They begin to look like miniature arms and legs with indentations where the fingers and toes will eventually develop.

By eight weeks, the developing embryo is about 38 mm long and has swellings which eventually become the ears, markings which look like eyes, and a mouth that opens and closes. The arms have a recognisable elbow and wrist, and the hands have ridges which indicate the fingers.

By ten weeks the fingers and toes are distinct. The embryo has some liver and kidney function and a spinal cord. Brain waves can be measured electronically and the first reflex activity can be observed. The embryo is now about 45 mm long.

The fetus

despite the placenta's protective role, some diseases, drugs and toxins can pass the barrier and pose particular threats to the developing fetus

A host of external factors influence the course and quality of pre-natal development. Their effects vary from positive to negative, depending on the nature of the experience. They include maternal characteristics of age, diet and stress, as well as contraction of diseases, ingestion of drugs and exposure to environmental toxins. Despite the placenta's protective role, some diseases, drugs and toxins can pass the barrier and pose particular threats to the developing fetus.

Twelve to twenty weeks. Some time between the twelfth and the fourteenth week, all the major organs, including the testicles or ovaries, have formed, and the circulatory system is complete. The time which follows this development is characterised by growth rather than by the development of new structures.

At 12 weeks the fetus looks human, though the large head appears out of proportion to the rest of the body. Measured from the top of the head to the buttocks, the fetus is about the width of an adult's palm, the head accounting for half of the size. The child's sex can be determined, the face has formed and the eyelids are present. The toes and the fingers are all formed and the nails are beginning to grow. The ribs and spine, which were cartilage or soft bone in the embryonic stage, are now turning to hard bone. The muscles too are developing and the fetus can now move freely within the womb.

Between the eleventh and fourteenth weeks, the fetus begins to make urine. Some is excreted into the amniotic fluid and reabsorbed by the fetus. The remainder passes out through the placenta into the mother's system. Between 15 and 18 weeks growth is very rapid. The limbs lengthen and the head looks smaller in proportion to the rest of the body.

Twenty to twenty-six weeks. The fetus has been moving vigorously for many weeks, but at some point between 16 and 20 weeks comes the moment when the mother can first feel the baby kick against the wall of the womb. At 20 weeks the fetus may actively suck when hungry. Some babies even suck their thumbs in the womb.

At 22 weeks the fetus is approximately 25 cm long. It has reached half its birth length. Its eyebrows and head hair are visible. Fine, downy hair known as **lanugo** covers the body. The nerve cells continue to develop. Within the womb the baby turns slowly, rather like an astronaut in space. Its control of movement is improving and it appears to land more often with the heavy head down. By now fetal movements are felt more strongly.

At 24 weeks the fetus is about 32 cm long and weighs around 500 gms. The nervous and respiratory systems are usually still not mature enough for survival outside the womb, but some babies born at 24 weeks have survived with intensive care in a special unit. At this stage the body is thin with wrinkled skin, but fat starts to appear in the tissues beneath the skin.

Twenty-six to thirty-two weeks. By 26 weeks the lungs begin to produce a foamy substance which prevents them from collapsing. The skin, which is now noticeably thicker and more opaque, is covered with a film of **vernix**, a mixture of skin cells and **sebum**, a fatty secretion that lubricates the hair and the skin.

during the last three months of pregnancy, almost every fetus in the study appeared to react to the tones with a more rapid pulse

At this point the fetus may be able to hear. In research carried out in Japan, tones were played directly to the fetus through earphones placed against the abdomen of pregnant mothers. During the last three months of pregnancy, almost every fetus in the study appeared to react to the tones with a more rapid pulse. This does not indicate that they hear with the same intensity or in the same way as they will hear at birth. The auditory system is still immature and sounds are muffled by the amniotic fluid.

At 28 weeks the fetus is about 35 cm long and weighs about 900 gms. There is still little fat under the fetal skin, which means that a baby born at 28 weeks lacks insulation against the cooler world outside the mother's womb. By 30 weeks a layer of fat is forming under the skin. The lungs are well developed and the central nervous system is at a stage where it can control rhythmic breathing movements. Babies born now are capable of breathing air and, given skilled care, have a 60 to 70 per cent chance of survival.

At 31 weeks, the fetus usually positions itself head down in the womb. By this time fetal movements are so pronounced that it is often possible for other people to feel them. Even before birth it is possible to detect differences between one baby and another since babies vary in their level of activity in the womb.

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The mother s psychological and physical state also has an effect on fetal development and its level of activity. Hormones produced in the mother when she is depressed or elated are transferred to the baby through the placenta.

Thirty-two to forty weeks. In the last couple of months of fetal life, the systems critical to the birth process develop rapidly. Babies born during this period usually survive. By 32 weeks their fingernails reach the tips of the fingers. By 36 weeks the toenails reach the toe tips. This is often one criterion doctors use to make a quick judgement about the degree of maturity.

Between 36 and 40 weeks there is considerable weight gain. In particular, there is an increase in the proportion of fat. At 32 weeks fat accounts for seven to eight per cent of body weight. By the time a baby is born, fat accounts for about 16 per cent of the weight. At 34 weeks babies look plump and are strong enough to have a firm grasp. Usually between 36 and 40 weeks, the head descends into the pelvic area in preparation for birth. As the baby now almost fills the space in the womb, fetal movements tend to be more limited.

At approximately 270 days following conception, the baby is ready to be born.

In all our existence, the nine month period of gestation can be regarded as the most eventful.

At conception, life begins as a single cell, weighing approximately 15 millionths of a gram. At birth, a child has over two billion cells and weighs, on the average, 3,250 grams.

The changes that occur in form are no less astounding than those that occur in size. The first few cells formed from the zygote are all identical. In a matter of weeks, however, an intricate rearrangement takes place. Different cells become the structures of independent organs. The rapid rate of growth and differentiation achieved in this short period will never recur at any other point in the life cycle.

The pre-natal period is often viewed as a model of development throughout the life span. Many of the principles used to explain development are first manifested during this period. For example:

Sequence. There must be one cell before there are two, and muscles and bones must exist before the nerves can co-ordinate movement.

Timing. If the newly formed sex glands do not produce male hormones at seven weeks following conception, the development of female genitalia is irreversibly set. This is evidence of the existence of critical periods in the formation of the basic organ system.

Differentiation and integration. The single cell of the zygote multiplies into the identical cells of the morula. These cells then differentiate into two distinct kinds of cells which are later integrated into a new configuration of cells.

Stages. Change and variation in the form of the organism and in the ways it interacts with its environment suggest that development is characterised by a series of transformations.

Uneven pace. From the earliest stage, the different sub-systems that make up the human organism develop at different rates.

Regression. Although development generally progresses from less to more complex patterns, there are periods of regression. Regression often occurs during periods of reorganisation just prior to the onset of more complex functioning.

Complexity of development. Scientists do not fully understand the complex processes by which the human organism develops from a single cell into a human infant. While the genetic material constrains the outcome, development is continuously sustained and propelled forward by new forms that emerge from the interaction of the organism with the environment.

Birth

After approximately 270 days of gestation, some unknown factor causes the mother's pituitary gland to release a hormone **(oxytocin)** that in turn instigates muscular contractions and expulsion of the fetus from the womb. The womb or uterus is actually a muscle that expands to accommodate the growing baby. **Labour** involves involuntary uterine contractions, beginning at the top of the muscle, that literally force the baby out. While the duration of labour is influenced by a variety of factors, contractions last an average of 16 to 17 hours for first births. Babies are normally born in head-first position. There are a few alternative presentations, the most extreme of which are breech (feet or buttocks first) or transverse (hammock position).

Various dangers must be negotiated during the birth process. The narrowness of the birth canal makes most new-borns look red and battered, with misshapen heads. These effects are temporary. More significant are dangers associated with oxygen deprivation and use of anesthetics during delivery. The fetus can experience a **lack of oxygen (anoxia)** for many reasons.

- The umbilical cord (through which the mother supplies the baby with oxygen) is pinched during a contraction
- The baby's orientation in the birth canal is unusual
- The cord has wrapped around the baby
- The baby is holding on to the cord and squeezing it

A baby deprived of oxygen for just a few seconds is in little danger. However, deprivation for a few minutes or more may cause some risk to the brain. Brain cells require continuous oxygenation if they are to survive and function.

Anoxia has two major effects on the brain. First, unlike other living cells, brain cells are not replaced when they die. Therefore, damage to, or loss of, brain cells as a result of anoxia is permanent. Second, anoxia leads to a build-up of pressure in the blood system. Fortunately, the probability of anoxia is limited precisely because birth is a time of great stress. The infant's metabolic rate and temperature fall during delivery, reducing the need for oxygen.

if a family knows that a birth is likely to be difficult or risky, it may be necessary to have the baby in a hospital or maternity clinic, or possible to move closer to a clinic or hospital

With any pregnancy, it is important to ask the advice of a health worker. Where should the baby be born? Who should attend the birth? If a family knows that a birth is likely to be difficult or risky, it may be necessary to have the baby in a hospital or maternity clinic, or possible to move closer to a clinic or hospital at the time so that the mother is within reach of medical help.

Pre-term birth

Babies delivered before 37 weeks of gestation are considered **pre-term**. Babies may be born pre-term for a number of reasons. First, problems in the mother's reproductive system may prevent her from carrying the pregnancy to term. Since multiple births place great demands on the mother, most multiple births are pre-term. In addition, consideration of the health of the mother or fetus may require that birth be induced early to alleviate stress. Second, the mother's reproductive system may be immature or may not have had sufficient time to recover from a previous pregnancy. Third, conditions that adversely affect the mother's general health status – including poverty, malnutrition, stress and inadequate medical care – are all associated with pre-term births. Finally, there is evidence that the level of psycho-social stress experienced during pregnancy also affects the likelihood of pre-term delivery.

Pre-term infants are generally considered to be '**at risk**', but the degree of risk varies dramatically. Pre-term infants are a heterogeneous group. Gestational age can range from 20 to 37 weeks and birth weights from 800 to 3,000 grams. By convention, babies are not considered pre-term when their birth weight exceeds 2,500 grams. This convention is unfortunate because it confuses **length of gestation** with **birth weight**. In fact, babies who are small for their gestational age face a different set of problems from pre-term babies.

There is little risk for babies who are born just slightly too early. Weight gain, however, is important for all pre-term infants because they lack even the modest layers of fat that help insulate babies from excess cold. When the degree of prematurity is more severe, there is the risk of respiratory distress syndrome. Pre-term babies often lack **surfactin**, a substance that coats the lungs and facilitates the exchange of oxygen from the air. They may also have problems sucking and swallowing, and the internal organs may be stressed by life outside the mother.

In the absence of a clear organic base for abnormal development, the degree to which pre-term babies develop well or poorly is directly related to the quality of the caring environment. Pre-term babies growing up in supportive environments tend to do well; those in more deprived environments develop poorly.

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Maternal characteristics

Health. Safe and successful childbearing depends most of all on the health and readiness of the mother. Maternal age is an important factor. **For health reasons alone, young women should try to delay pregnancy until at least the age of 18.** This is the age at which women are considered physically ready to begin bearing children. Babies born to women younger than 18 are more likely to be born too early and to weigh too little at birth. Such babies are much more likely to die in the first year of life.

The risks to the young mother's own health are also greater. In societies where many women marry at an early age, couples should use family planning to delay the first pregnancy until at least the age of 18.

After the age of 35, the health risks of pregnancy and childbirth increase. If a woman is over 35 and has had four or more previous pregnancies, another pregnancy will present risks to her own health and that of her unborn child.

One of the most effective ways of reducing the dangers of pregnancy and childbirth for both mother and child is to plan the timing of birth

The number of previous pregnancies and the spacing between births also affect the birth process. **One of the most effective ways of reducing the dangers of pregnancy and childbirth for both mother and child is to plan the timing of births.** For the health of both mothers and children, parents should wait until their last child is at least two years old before having another baby. Children born too close together do not usually develop as well, either physically or mentally, as children born at least two years apart.

In fact, one of the greatest threats to the health and growth of a child under the age of two is the birth of a new baby. This is because breast-feeding stops too suddenly, and the mother has less time to prepare the special foods a young child needs. Also, she may not be able to give the older child adequate care and attention, especially during illness.

If a woman becomes pregnant before she has fully recovered from a previous pregnancy, there is a higher chance that her new baby will be born too early with too low a birth weight. After a woman has had four children, further pregnancies bring greater risks to both mother and child. A woman's body can easily become exhausted by repeated pregnancy, childbirth, breast-feeding and looking after small children. There is an increased risk of serious health problems such as **anaemia** (thin blood) and **haemorrhage** (heavy loss of blood).

Nutrition. The diet of the mother affects the developing fetus. Women who are healthy and well fed during their own childhood and teenage years have fewer problems in pregnancy. Pregnant women need a variety of the best food available to the family, including milk, fruit, vegetables, meat, fish, eggs, pulses and grains.

If possible, a woman should be weighed as soon as she knows that she is pregnant. It is important to gain weight every month during pregnancy and to try to gain a total of about five to six kilograms before the baby is born.

A maternal diet rich in protein means fewer complications during pregnancy, shorter labour and healthier babies. In particular, protein intake during pregnancy has been associated with both the actual length of the infant at birth as well as infant psychomotor development.

Maternal malnutrition is a subject of much study today, since infants born in many regions of the world are likely to experience it to some degree. Clearly, maternal malnutrition in pregnancy is extremely serious because nutrients constitute the elements of life. They can be viewed as the fuel that propels development as they nourish the placenta that provides oxygen to the fetus.

New-born children can be put at risk by cultural beliefs and practices that prevent pregnant women from eating foods with proteins important to pre-natal growth. For example, the Siriono of South America do not allow women to eat the meat of animals and birds that are normally part of their diet. They are afraid that characteristics of these animals will be transferred to the unborn child. Pregnant women need the best foods available.

because social class is associated with factors such as poor nutrition and inadequate medical care, the children of impoverished women have poorer outcomes

Stress. Other psychological, familial and sociological factors influence pre-natal development. For example, maternal distress affects maternal hormones, which in turn affect the fetus. Long-term distress during pregnancy can be a factor in lower school achievement and psychosomatic disorders in children 15 years later. **Because social class is associated with factors such as poor nutrition and inadequate medical care, the children of impoverished women have poorer outcomes.** Fortunately, the health of new-born children and fetuses can be promoted by good ante-natal care and supportive and stimulating child-rearing environments. New-borns have an amazing capacity to catch up if given the right environment.

All over the world women carry many burdens, though their efforts are often unrecognised. In the developing world, women grow most of the food, market most of the crops, cook the meals, clean the compounds, wash the clothes, do the shopping and look after the old and the sick. Often they can barely care for their own children. If men in all countries can be encouraged to participate more fully in that most difficult and important of all tasks – protecting the health and development of their children – the benefits would be great.

Disease in pregnancy

Sexually transmitted diseases, smallpox and measles can all cross the placental barrier and affect fetal development. For example, German measles (rubella) during the first trimester (three months) of pregnancy when central nervous system structures like the eyes and ears are developing presents a particular danger. Women who contract German measles at this time have a 50 per cent risk of bearing infants with cataracts or hearing loss. Various other long-term abnormalities are associated with rubella, including brain damage and mental retardation.

It is also known that Human Immuno-deficiency Virus (HIV), which produces AIDS, can pass the placental barrier to infect the developing fetus. The majority

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of women infected with HIV are of child-bearing age and approximately 25 to 50 per cent of infants born to mothers infected with HIV become infected. The incubation period of HIV in children varies, depending on how it is transmitted. A child infected pre-natally by his or her mother may test positive because the mothers' antibodies may remain in the child's blood for up to 18 months. For this reason children are not diagnosed until 18 to 24 months when tests can detect their own antibody status.

The majority of infants with perinatally acquired HIV infections appear normal at birth. But this is deceptive: they develop symptoms within six months and AIDS within two years. Infants with HIV infection experience a host of symptoms that are progressive in nature. Under these conditions, prognosis is poor and survival beyond infancy is rare. In addition to these medical concerns, the quality of life of infected children is tragically compromised.

Drugs

women who smoke have a higher incidence of spontaneous abortions, still births and pre-term deliveries

It is well established that many common drugs can compromise the fetus. Nicotine from tobacco smoking is believed to constrict placental blood vessels. This temporarily deprives the developing fetal brain of oxygen, stimulates the cardio-vascular system and depresses the respiratory system. Women who smoke have a higher incidence of spontaneous abortions, still births and pre-term deliveries. Their babies tend to be smaller and to be born at increased risk of cleft palate, mental retardation and hyperactivity.

It is well known that the fetus is sensitive to everyday drugs such as alcohol. **Fetal alcohol syndrome** is now considered to be the leading known cause of mental retardation. Like women who smoke, women who drink experience a higher incidence of spontaneous abortions, still births and pre-term deliveries. Women who use narcotic drugs can also damage the unborn child. It is particularly important not to take medicines during pregnancy unless they are absolutely necessary and prescribed by a trained health worker.

Environmental toxins

The environment also contains hazardous toxins, or poisons. These include: PCB, DDT, lead and mercury. Each has adverse implications for the development of the fetus. Radiation also has severely detrimental effects as dramatically demonstrated by studies of Hiroshima. There is a strong correlation between the proximity to the atomic bomb explosion site among pregnant women and the incidence of mental retardation and microcephaly. However, the precise effect of environmental toxins on the developing fetus is often difficult to determine. Their selectivity and long latency period combine to make them difficult to discover, and they may not manifest systematic or pervasive effects.

The effect of outside toxins is greatest during sensitive periods. A **sensitive period** is defined as the time during which the organism is especially vulnerable to outside influences that can modify its structures or functions. This would include the interaction between the developing fetus and the environment in the period between the emergence of a structure or function and the development of its mature state. Sensitive periods are thus those in

which the system undergoes the most rapid growth including the development of organs, limbs, and the sensory system.

For example, as the eyes develop most rapidly in the second month of pregnancy, the visual system is especially vulnerable. All the major organ systems develop early, with development slowing toward the end of gestation. Thus the likelihood of gross structural malformation as a result of outside factors tends to decrease in the later part of the pregnancy.

To sum up, more developed fetuses are at much lower risk to many toxins than less developed ones. Consequently, the effects of a toxin depend as much on timing as on the nature of the toxin itself. For example, two different toxins may have very similar effects at the same phase of pre-natal life, yet neither may affect development at other stages.

Developmental Health Watch

It is important for pregnant women, their husbands, partners and other family members to recognise these signs. They indicate that extra care and regular visits to a health worker are needed.

Maternal warning signs before pregnancy begins:
An interval of less than two years since the last birth
Under 18 or over 35 years of age
Four or more previous children
Previous baby born weighing less than two kilograms at birth
Previous difficult or Caesarian birth
Previous miscarriage, abortion or still birth
Low maternal body weight, less than 38 kilograms before pregnancy
Short maternal stature, less than 145 cm in height

Maternal warning signs during pregnancy:
Failing to gain weight (at least six kilograms should be gained in pregnancy)
Paleness of inside eyelids (should be red or pink)
Unusual swelling of legs, arms or face

Four emergency signs – get help immediately:
Bleeding from the vagina during pregnancy
Severe headaches (sign of high blood pressure)
Severe vomiting
High fever

3 The new born child: the first month of life

Introduction

The new-born child must cope with more change than at any other time in the human experience. Separated from his mother, the new-born must learn how to take care of himself. He must begin to use his reflexes for sucking and swallowing and for digesting food. He must use the energy from that food to keep his body running, and he must keep on growing. He must breathe to get oxygen and keep his air passages clear. He must also cope with all the excitement as the new world comes to greet him. There are sounds, smells, tastes, and things to see. Everything is new. Everything is different.

To help accomplish all these tasks, new-borns have instincts and reflexes and working senses. What they lack is knowledge and experience. The new-born does not even know that he is himself or that his own hand remains part of him after it has disappeared from sight. He is programmed to suck when offered a nipple. He understands little but is programmed for survival.

In the first few days, the new-born's behaviour is random and unpredictable. His hunger and digestion are not settled and his sleep patterns have no structure. He may cry suddenly without reason and then stop just as quickly.

Fortunately, the parents or those caring for the new baby have some instincts as well. However, they also have a lot to learn at this time. They need to learn how to handle this particular baby. Continual adjustments in caring behaviour need to be made until a pattern is established. It may take just a few days or it may take several weeks before the caregiver and the new-born child begin to understand each other.

One thing is certain: babies are not passive. They have a built-in interest in the people around them. The caregiver's instincts and knowledge combined with the baby's reactions and temperament provide the best guides to fostering healthy development during the first few days.

One good guide: the baby needs to be handled gently. His new life should not differ greatly from his stay in the womb. His needs are simple, immediate and repetitive. He needs food and water in the combined form of milk, he needs warmth and comfort, he needs to be kept clean and he needs protection. Wrap him warmly, hold him closely, handle him slowly, wash him when he is dirty, and give him quiet time to gradually learn about the world around him. In this way he will gradually come to realise that the world is a good place in which to live.

Physical appearance

Babies come in all shapes and sizes. Whatever it is, each baby's **birth weight** is his personal starting place for growth. The average birth weight of the new-born infant is just over 3.2 kg. But there are many variations. Boys are a little heavier than girls and first babies are lighter than later-born ones. Large parents tend to have larger babies and small parents have smaller ones. Heavier babies, weighing 4.5 kg., are usually more mature at birth than other new-borns. In some cases, heavier babies are born to diabetic or pre-diabetic mothers. In these rare cases, the baby's metabolism may have been disturbed in the womb.

Low birth weight is a major concern. Babies whose birth weight is less than 2.2 kg are probably smaller than nature intended. Low birth weight babies are either **premature** or **small-for-date** babies. Premature babies are born after fewer than 40 weeks in the womb. Small-for-date babies do not grow as much as expected during their time in the womb. They may have spent the full 40 weeks in the womb but they still lack necessary nourishment. The placenta may have been inadequate or there may have been problems with the mother's health and nutrition which prevented the baby from receiving the necessary nourishment.

Some babies may be both premature and small-for-date. These babies are born prematurely but are even smaller at birth expected after that period of gestation.

The new-born's physiology is different from older children's. Since it takes time for the new-born to adjust to life outside its mother, new babies may show all kinds of colour changes, spots, blotches, swellings and secretions. These are for the most part insignificant when they occur in the first two weeks after birth. If they appear after the baby is two to three weeks old, a doctor or nurse should be consulted.

Feeding

Breast milk is the food nature intended for babies. During a feeding the supply of breast milk adjusts to the baby's needs: the baby first gets 'foremilk' which satisfies thirst and the desire to suck. As the baby sucks longer, he receives the richer 'hindmilk' which satisfies the appetite.

the baby should be put to the breast regularly during the first few days both to get the vital colostrum and to practice feeding while the breasts are still soft

The baby's sucking actually stimulates the production of milk. During the first few days of life the breast produces colostrum. Colostrum consists of water and sugar as well as protein, minerals and antibodies that protect the baby while the immune system develops. The baby should be put to the breast regularly during the first few days both to get the vital colostrum and to practice feeding while the breasts are still soft.

Babies do not need much food in the first three or four days of life. **They usually lose weight for four or five days before they start to gain.** During the first five

days of life it is usual to lose 225 gms. and then gain it back over the next five days. Thus a baby's weight at ten days is often the same as it was at birth.

To help babies learn that sucking equals food equals comfort, they are born with several important reflexes. For example, a baby who is hungry turns his head toward a gentle touch or stroke on his cheek. As soon as he feels the touch of the nipple or finger he will suck.

The size of the breast has no relevance to the mother's ability to produce an abundant supply of milk.

Milk is produced in deeply buried glands, not in the surrounding fatty tissue. Real milk begins to flow between three to five days after birth. It looks bluish and watery compared with the thick yellow colostrum.

Milk is released into the breast through a mechanism known as the 'let-down reflex.' This reflex is stimulated by sucking, hunger cries or a baby's actual presence. A hormone, known as oxytocin is then released into the blood stream. This makes the muscle fibres around the milk glands contract, forcing milk into the ducts. Oxytocin also makes the muscles of the womb contract. Sometimes this reflex makes the breasts leak milk when they are too full.

The amount of milk produced depends on how often the baby sucks. The more he takes the more is made. It is a natural 'supply and demand' system.

As the breasts are emptied, more milk is made. If the baby has got enough at the first feeding, he will be satisfied for some time. If he does not get quite enough, he will soon be hungry and will want to suck again. The more often he empties the breasts, the more milk will be produced. Eventually the breasts will make enough milk to satisfy the baby's hunger.

Most babies want to feed about every three or four hours. But mothers can help the natural system work by letting the baby suck as often as he is hungry. She should also let him suck at both breasts at each feeding, for as long as he wishes.

if the baby is fed in a fairly upright position, the heavier milk will find its way to the bottom of the stomach and the lighter air will gather at the top

Air is always in the baby's stomach. It is swallowed while crying and breathing as well as while feeding. If the baby is fed in a fairly upright position, the heavier milk will find its way to the bottom of the stomach and the lighter air will gather at the top. Burping occurs when the stomach is uncomfortably full with milk and air. Babies who swallow air before they have had enough milk need to burp mid way during the feeding in order to make room for the rest.

Almost all babies bring up milk along with air. In fact, some babies bring up milk at every feeding. If a baby brings up milk some time after feeding, the milk will be curdled as the digestive juices have already begun to take effect. In this case, the baby may have had some air trapped inside the stomach which now comes up along with partly digested milk. This may be due to a digestive

disturbance – the signal of an illness. If the baby does not seem well and has diarrhoea or fever, he should be taken to the clinic.

Growing

Until three or four months of age, babies can exist entirely on breast milk. On average a baby will gain 170 grams each week and the rate of weight gain is important. A baby's birth weight is the unique starting point for growth.

> *Whatever the birth weight, a new baby will grow roughly the same amount and at approximately the same rate as all other babies.*

His overall growth follows a set path. As long as he is fueled with proper food and care, upward growth will be steady. When illness, starvation, neglect or emotional disturbance cause his weight gain to dip downward, an extra boost of food and special attention are needed to get back on the right course.

Weight gain is not the only way to assess growth. Getting longer is important too. Length changes more slowly than weight but a baby gains an average of approximately 2 cm. each month. Just as there is an expected weight for a baby of any age, related to birth weight, there is an expected length at any age, related to birth length. If all is going well, these two measures of growth will increase in a consistent pattern.

After the first or second year, babies no longer grow at similar rates. Many factors affect a baby's growth pattern. Some are overfed while others are underfed; some are subject to infections while others are resistant to them. Eventually the child's own hormone and genetic growth potential affect both the rate and pattern of growth.

Premature babies may be slow to gain weight. They may stay small relative to other babies of the same age for quite some time. Small-for-date babies often make startling growth during the early weeks. With good care, in fact, these babies may move from the bottom of the growth chart to the top. It is important to make sure that both weight and length increase at the same rate.

Keeping warm

Warmth is important to new babies. Their surroundings should be kept at the right temperature so that they do not have to use any energy to keep themselves warm. Babies produce heat efficiently from the moment of birth, but unlike adults, they are not very good at conserving energy. They must keep on using energy to keep themselves warm.

The ability to keep themselves warm improves with age and weight. For example, a three month old baby, weighing 5.5 kgs., can conserve warmth. If he is not warm enough, he can afford to use some energy to keep warm.

Premature and small babies should be kept at a steady temperature (29 C). When babies are cold and uncomfortable, they get restless and breathe faster than usual. However, when a baby is very cold – when he is losing the battle to stay warm – his behaviour changes. He becomes very quiet and still and does

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not cry. Only when he begins to get warmer does he have enough energy to cry. A cold baby should be taken into a warm room or cuddled under a wrap or blanket until warmed.

Hot weather seldom bothers babies. They should have plenty to drink and wear loose light clothes so that sweat can evaporate and cool them off. Direct heat is a hazard and the baby's fragile skin should always be protected from the sun.

Digesting

changing stools have a peculiar character due to the change from feeding in the womb to ordinary digestion. They are usually green-brown, semi-fluid, and frequent

Once the baby has passed **meconium**, a thick greenish black sticky substance which fills baby's intestines while in the womb, his stools are known are '**changing stools**.' Changing stools have a peculiar character due to the change from feeding in the womb to ordinary digestion. They are usually green-brown, semi-fluid, and frequent. It may be three or four weeks before the baby passes normal stools.

The stools of breast-fed babies are orange-yellow with the consistency of mustard. Stools that are green or full of mucus are normal during this period. Moreover, babies vary in the amount passed each day. They may have many movements in a day or one movement every three, four or seven days. Both extremes, from many movements in a given day to one every three or four days, are normal. So is everything in between.

Learning to move

The new-born baby is equipped to use his body to explore and interact with his world. In the first few days the baby is often found curled inward with the body taking a position relative to the head. This is because the head is so large and heavy in relation to the rest of the body at this stage that it acts as a pivot. At the beginning the baby can only lift his head a little. Soon he will be able to balance his head for several seconds.

During the first weeks of life, the new-born has some reflexes which look like crawling or even walking. However, these are simple reflexes which disappear after a few days and are then relearned months later as a new accomplishment.

For example, if you put a baby on his stomach, he will flex his arms and legs so that it looks as if he is about to crawl. If you hold the baby upright with his feet touching a firm surface, he will take deliberate steps placing one foot after another. As with some other reflexes, this one vanishes in a few days. It will be almost a year before he can really walk.

Another strong reflex is the grip. The baby's hand will grip around a finger or a rattle placed into a closed fist. This reflex may be left over from pre-history when the children of our primate ancestors kept themselves safe by clinging to their mothers.

Movement Milestones at One Month

Makes jerky, quivering arm thrusts

Brings hands within range of eyes and mouth

Moves head from side to side while lying on stomach

Head flops backward if unsupported

Keeps hands in tight fists

Strong reflex movements

Using the senses

Learning through the five senses goes on from birth. From the moment of entering the world, the new-born's senses are in working order. A baby does not have to learn to see, to hear, to sense touch through the skin, or even to smell or taste. The equipment for all these activities is built-in; what is needed is experience.

Smelling and tasting. It is assumed that new-born babies have a sense of smell because taste and smell are intimately linked. Babies react negatively to bitter, acid or sour tastes and can actually differentiate between plain, slightly sweetened and very sweet water. They will suck longer and harder as the sweetness increases.

Making sounds. Crying is the baby's only deliberate sound during the early days. In fact, babies have a range of different cries which represent different states. These cries differ in tone, duration, and rhythm. **A pain cry** has a particular intensity and rhythm. **A hunger cry** is quite different. It has a particular pattern of sound and pause which is the same for all babies. **Fear cries** are sounds of pure desperation.

By four weeks of age, babies begin to make other sounds besides crying, including gurgling noises after feeding. These noises are the precursors of cooing - the next stage in communication.

Listening. Babies can hear from the moment of birth. They can even sense different sound vibrations while they are still in the womb. Sudden loud noises will startle the baby while repetitive and rhythmical sounds are relaxing. The baby clearly hears all these sounds, but he concentrates most intensely on the human voice. He has a built-in interest in voices and voice-like sounds. He listens without looking for the source of the sound.

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Crying babies can often be soothed by the sound of the mother's voice. It will be a long time before the baby can understand words, but from the first days he will react to the tones of the mother's voice. He loves to hear her talk.

Touch. The new-born infant is particularly sensitive to the messages carried by the skin. Through receptors for temperature, contact and pain, the skin sends many messages to the brain. This information helps the new-born baby understand what is happening in his new and unfamiliar world.

Looking. Babies can see from the moment of birth. A new-born is able to see things at different distances. Objects placed at 20-25 cm. from the nose are the easiest for the baby to see. This is just about the distance of the mother's face as she breast-feeds.

The baby is programmed to pay attention to complex patterns and shapes because he must learn a complex visual world. Just as voices are the most important sounds for him to hear, faces are the most important objects for him to see. He is innately programmed to study them whenever he can. While he is not capable of recognising faces, he pays visual attention to anything which is face-like, concentrating on the eyes. One day soon he will make his first true social gesture to the outside world – he will smile.

Smell and Touch Milestones at One Month

Prefers sweet smells

Avoids bitter or acidic smells

Recognises the scent of his mother's breast milk

Prefers soft to coarse sensations

Dislikes rough or abrupt handling

Crying and comforting

Why do new-born babies cry?

Crying is a baby's way of communicating to the people in his world. **Different cries provide different kinds of information.** Babies always cry for a reason. Usually the need is simple and can be easily satisfied by food, warmth, cuddling or rocking. Sometimes the need is not so easily satisfied and all efforts to help are rejected. At these times parents and caregivers often feel helpless and confused. They just cannot seem to make the baby feel comfortable. Some reasons why new-born babies cry are suggested below.

Hunger. Hunger is the most common cause of crying. If the baby is hungry, only milk going to his stomach will stop the cries.

babies are less sensitive to pain than older children – they need special protection because the feeling of pain serves to protect humans.

Pain. While pain causes crying in the new-born, it is difficult to be certain of the cause. The pain caused by hot water or a pinprick results in a heartbreaking cry. However, the baby may feel relatively less pain, because his nervous system is still in formation. The coating of nerve cells that respond to pain is not complete for months after birth. As a result, babies are less sensitive to pain than older children. So they need special protection because the feeling of pain serves to protect humans.

Over-stimulation. Too much stimulation – sudden loud noises, bright lights, sharp or bitter tastes, rough handling – can overwhelm a new baby. How do we define too much stimulation? It is determined by the baby's mood and temperament. Stimulation that is enjoyable when he is awake, content and well-fed may make him cry when he is sleepy, irritable or hungry.

Cold. Feeling cold will cause crying if the baby is awake. The crying will stop as soon as the baby is brought into a warm room.

Random movements. Most new babies will jerk and twitch when they are in a drowsy state near sleep. Some babies are startled awake over and over again by their own movements. They cry, drowse, jerk and cry again, unable to get themselves to sleep. Wrapping or swaddling which is neither too tight or too loose will help babies feel more comfortable. Wrapping prevents the baby's own movements from disturbing him.

Babies should be wrapped in a natural position with arms bent at the elbows and legs flexed. The hands should left free so he can suck them. Babies vary in the length of time they enjoy being wrapped. When they are ready, they begin to kick and struggle for freedom.

Lack of physical contact. Some babies cry until they are picked up, stay cheerful while held, and cry again when put down. They are crying because of lack of contact comfort. It is natural and instinctive for a small baby to be content when held. Crying often stops as soon as the baby is picked up again and held.

Irritability. Some babies are simply more irritable than others. A baby who cannot relax can be comforted by a variety of rhythmical movements and/or sounds. These seem to work by blocking out internal or external discomforts. Sucking will often help soothe a baby who is not hungry. Sucking is helpful for some kinds of general irritability or tension which may be preventing a tired baby from getting to sleep.

A particularly disturbing crying pattern, known as colic, occurs in some new-born babies. At about three to four weeks, a period of crying begins in the late afternoon or evening. At the same time every day, the crying builds into a screaming fit which lasts from one to three hours. No amount of comfort is able to stop such episodes and the crying subsides only with time.

Colic has been attributed to many things, including: overfeeding, underfeeding, allergies, hernias and maternal exhaustion. While particularly distressing for

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the mother, colic has no known cause, no treatment and no ill effects on the baby. Usually it does not last for more than 12 weeks.

Different types of new-born babies

each baby is different as a result of a unique set of experiences in the womb as well as in their environment after birth

All healthy new-born babies have many traits in common. However, each baby is different as a result of a unique set of experiences in the womb as well as in their environment after birth. The baby should be handled in ways which keep him happy and calm.

It is difficult to generalise here as so many factors inter-relate. For example, the kind of care the baby receives affects him while the type of baby he is, in turn, affects how he is handled. Some different types of babies are described below.

Uncuddly babies. Most babies thrive on warm, close physical contact with adults. But uncuddly babies seem to reject or even resent the physical constriction of enfolding arms or blankets. These babies seem to prefer eye contact to cuddling. While cuddly babies need eye and voice as well as body contact, uncuddly babies are comforted by looking and listening.

Miserable babies. This type takes a long time to settle into patterns of sound and comfortable sleep-wake-feed-sleep cycles. Their behaviour is unpredictable. These babies are often difficult to feed and not very responsive to social interaction. Babies with this pattern may gain weight more slowly and be slow to start smiling or playing with hands.

Jumpy babies. While all new-born babies are startled by loud noises and dislike bright lights, jumpy babies show extreme forms of this behaviour. They seem to be frightened of almost everything and over-react to most stimulation. Even their own random movements disrupt them from getting into deep sleep. When picked up, they become tense while putting them down makes them jump. Any change in their surroundings, however slight, seems to alert and alarm them.

Sleepy babies. Some babies seem to avoid life by going to sleep. They are often described as 'no trouble' babies. They make few demands and may even need to be awakened for most of their feeds. It is often difficult to persuade them to stay awake long enough to suck. They do not seem to care about their surroundings or routines. While they seldom cry for long, they do not seem particularly happy either.

Sometimes, an exceptionally sleepy baby fails to gain as much weight as he should because he is so undemanding. It is important that this baby be fed at least every four hours. Special efforts should be made to engage him in various kinds of social interaction. Try to get him interested in looking at things to respond to.

Developmental Health Watch

The following behaviour, if observed during the second, third or fourth week of life, may provide signs of developmental delay. A health worker should be consulted for more detailed assessment.

Sucks poorly and feeds slowly

Does not blink when shown a bright light

Does not focus to follow a nearby object moving back and forth

Rarely moves arms and legs; seems stiff

Seems excessively loose or floppy in the limbs

Lower jaw trembles constantly, even when not crying or excited

Does not respond to loud sounds

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4 The infant: the first six months of life

Introduction

All of a sudden new-born babies are no longer so unpredictable. Instead they establish their own tastes, preferences, and unique characteristics. When this happens the new-born period comes to an end, and a more settled baby emerges.

At this time, babies' interest in people becomes increasingly obvious. Faces fascinate him. Every time a face comes within range, he studies it intently from hairline to mouth and finishes by gazing into the eyes. He listens attentively to voices and turns his eyes and head to see who is talking. It is clear that the baby's primary need is for people he knows and recognises. If he is to survive, the baby has to attach to a caregiver who will meet his needs. This may or may not be the mother, depending on circumstances. It is not the relationship to the child that matters most – it is the quality of care. Sometime between four and eight weeks, babies will smile in response to their caregiver's face.

The baby's early smiles are nature's way of ensuring against neglect. The more he smiles and gurgles the more people respond to him. Thus a lasting bond is created between the baby and those who care for him. By the time he is three months of age, he smiles most intently at his primary caregiver and is ready to form a passionate tie to her or him.

babies who receive adequate physical care but who do not receive emotional responses will not develop as fast or as far as their innate drive and potential allow

Babies become closely attached to those who come when he needs help or company, who notice when he smiles and smiles back, who hears when he 'talks' and who listens and responds. This responsive behaviour is critical to three month old babies. It is the basis of love. All babies need at least one special person with whom to form a close bond. Through this special relationship they learn about people and the world. Through this relationship they become capable of giving and accepting affection and love. Babies who receive adequate physical care but who do not receive emotional responses will not develop as fast or as far as their innate drive and potential allow.

Fathers and other family members also play an important part in the early development of the baby. Different faces and ways of talking and playing are fresh and interesting to the baby. Even at this age, babies are capable of having and enjoying different kinds of relationships with those who are close to them.

Growing and caring

Physical appearance

On the average, babies gain approximately 30 grams each day from the time they are ten days old until the third month. After three months, the rate of growth

begins to slow down and babies gain approximately 140-180 grams each week. Remember that **a consistent pattern of weight gain is more important than the amount of weight gained.** A baby may be underfed if his weekly weight gain has followed the shape of the growth chart but suddenly slows down so that the curve flattens. Some babies just grow more slowly than other babies, so their curve is flatter than the average. This too is a normal pattern of growth.

Feeding

By two weeks of age, most babies have settled into smooth feeding patterns. Observations shows that much learning takes place around periods of feeding. After three or four minutes of gulping, a perfect rhythm is established: a burst of sucks is followed by a breath, a pause and another burst of sucking. The rhythm slows a little, the pauses get longer and the bursts of sucking become shorter.

Some babies do not find feeding so smooth and easy and show the unsettled behaviour more typical of the new-born period. This is especially true of babies who are born early or who are too small at birth. If the baby is reasonably content most of the time, gains weight steadily and is increasingly active when awake, then all is going well. **If an infant is not thriving in this way, it may be possible that he is not getting enough to eat.**

A typical feeding pattern could be described as sufficient milk supply during the first two to three weeks. The baby settles down to a consistent feeding pattern.

However, supply may vary. The increasing demands and pressures of caring for a new baby as well as all the other stresses and pressures placed on mothers may affect the amount of milk produced. With breast-fed babies, underfeeding can occur gradually. This makes it difficult to identify the problem. Hunger in the baby indicates that less milk is available. In this case, it is important to allow the baby to suck more often since the milk supply is increased through sucking. The more the baby sucks the more milk is produced. When his frequent sucking has built up the needed supply, the amount of sucking will decrease.

Once the mother's milk supply is adequate, it is important to see that it remains that way. Since the baby can take more than a pint of fluid, it is important for the mother to have an adequate intake of fluids and a nutritious diet. An inadequate diet combined with increased depletion of calories, proteins and vitamins as a result of breast-feeding may leave mothers in a less than optimal nutritional state. Mothers with inadequate nutrition are tired and less able to cope with all the demands made upon them. Mothers who are under stress also produce less milk. Although this mechanism is not quite understood, tension often prevents the 'let down' reflex, so the milk does not flow in response to the stimulation of sucking.

Breast milk alone is the best possible food and drink for a baby in the first four-to-six months of life. All substitutes, including cow's milk, milk-powder solutions and cereal gruels, are inferior. Even in hot, dry climates, breast-milk contains sufficient water for a young baby's needs. While there are no hard and

fast rules, it is generally agreed that babies should not begin solid foods before four months of age. Breast-feeding should still continue after the introduction of supplementary feeding.

When solid food is introduced, very small quantities are advised. Solid, or weaning, foods should be fed along with the usual amount of milk. Solid foods should be increased only if the baby wants more after consuming an adequate amount of milk. Even when solid foods are introduced, breast milk will continue to provide almost all the protein, minerals, and vitamins that are needed. Thus the first solid foods are needed only for their calorific value.

The selection of foods should include those with a semi-liquid texture. For example, cereals are often the baby's first solid foods. Cereals have the advantage of being rich in iron which is important to breast-fed babies. They also have a bland milky taste which is sufficiently like the baby's accustomed food to make them acceptable. Boiled, peeled and mashed vegetables can also be added to cereals.

Babies should be offered a variety of flavours. It is best to experiment in order to determine their preferences as babies have specific tastes even at this early stage. Most babies over four months can digest a wide range of foods easily. But several things are important to remember:

- salt should not be added because extra salt can stress immature kidneys.
- avoid spices and exotic seasonings
- foods should be strained, ground or liquidised
- avoid too much sugar or too much fat – these can upset a young baby's digestive system.

Babies are accustomed to a perfectly balanced diet of breast milk, so they need time to adjust to the varying amounts of sugar and fat found in solid foods.

There is no hurry, so go slowly. Remember, the baby has a major task. He must learn that hunger can be satisfied with foods other than milk and that these foods can be consumed in other ways than sucking.

Sleeping

The new-born baby drifts randomly in and out of sleep. At three to four weeks of age, sleeping and feeding still go hand in hand. Left to follow their own inclinations, they wake up because they are hungry and go to sleep because they are full. Their waking time is concentrated around feedings. Because of this it is important to play and talk with the baby while he is awake. Babies love all the affection that can accompany feeding and caring activities. This affection is critical to the baby's growth and healthy development.

By six weeks, the close relationship between feeding and sleeping begins to lessen. Most babies adopt one particular time of the day to be wakeful. A common time is the late afternoon. By the time a baby reaches three to four months, he is likely to have two or even three wakeful periods a day. As before,

a good feeding makes babies sleepy. As they grow older the naps become progressively shorter. At this age, babies sleep as much as they need to sleep and are not capable of keeping themselves awake.

Babies should sleep soundly at night by now. In some cases, they may not have made a complete distinction between day and night behaviour. If he sleeps almost all day, he is bound to choose the evening or night for wakefulness.

Digesting

Gradually the baby's digestive system begins to settle down. Filling the stomach sets off a reflex which shifts waste down the intestine to the rectum. Once the baby feeds regularly, regular movements may be passed during or immediately after feedings.

Breast-fed babies are less likely to suffer digestive disturbances, to get diarrhoea or to become constipated. Do not be concerned if there are sometimes several stools per day and then days without one. Frequency does not matter either way. Even a week without a stool does not mean constipation if the final outcome is soft and easily passed.

As soon as solid food is introduced, the stools change colour. Colour changes or particles of undigested food simply mean that the baby's digestion is not completely breaking down the new substances. In these cases, it is best to withhold that particular food for several days and reintroduce it in smaller quantities.

Teething

Teeth appear in a particular order and roughly at specific ages. While there is wide variation, the first tooth usually appears at five or six months. A baby cuts the front teeth first but does not chew with them any more than an adult does. Babies start chewing with their gums and perfect the technique long before they acquire teeth at the back of the mouth to help them. Babies start teaching themselves to chew as soon as they can get their hands on objects to hold and bring to their mouths. It is important that they be given foods to chew soon after this.

The first tooth will be visible as a small, pale bump under the gum for days before it finally appears. When its point breaks through, it will be sharp. The parent or caregiver should not regard it as a signal to speed up weaning as there is as yet no possibility of actually biting. The first tooth and the second one which follows it two or three weeks later are bottom teeth. The baby does not yet have a matching top tooth so he cannot bite down. The emergence of these first teeth rarely causes fever or pain, but teething can make babies irritable and fussy.

the pattern of development is the same for all babies but the rate at which it occurs will vary. Some normal babies may be weeks behind other babies at the same age, while others may be weeks ahead. All these patterns are within a normal range

Babies are born with very little control over their limbs or bodies. In addition, their posture is dominated by their over-heavy heads. Muscle control starts from the top and moves downward in an orderly sequence as babies gradually learn to support their heads with their weak neck muscles. **The pattern of development is the same for all babies but the rate at which it occurs will vary. Some normal babies may be weeks behind other babies at the same age, while others may be weeks ahead. All these patterns are within a normal range.**

All babies learn their physical skills in the same order. For example, a baby may learn to sit early or late, but all babies learn to sit before standing.

The achievement of various 'milestones' like rolling over, sitting, crawling, standing or walking should not be used to compare children. A baby is not better or worse because he learns to manage something sooner or later than another baby. **Each baby is unique and takes his own time to move along the developmental path.**

By six weeks most babies are able to balance their heads upright. When lifting or carrying a baby of this age, a hand at the back is needed. Over the next six weeks the neck muscles get firmer and control moves gradually down to the shoulders. As the baby grows and puts on weight, his head gets lighter in relation to the rest of his body. By the time an infant reaches three months, his head control should be complete.

The baby's posture changes as he gains head control. He gradually uncurls from the new-born position and learns to lie flat on his back. When lying on his stomach he learns to stretch his legs out from underneath him. When held at the shoulder, he holds himself upright. These small and gradual physical developments are important because they affect his ability to explore.

Uncurled and kicking, the three month old baby can enjoy the pleasure of vigorous play. Once he can lift his head off the mattress it will not be long before he discovers how to lift his shoulders by putting his weight on his forearms. By nine or ten weeks, when placed down on their sides, babies will roll onto their backs. By three months, the baby has learned to roll from his back to his side. **But in order for this development to occur, his caregivers need to place the baby often in different positions.**

Once the baby can hold his head up when lying on his stomach, muscle control moves downward to the upper back. Between three and four months, babies love to try sitting but need support.

By five or six months the baby's muscle control moves downward again. Now his back will be under control although his hips still sag. When he is pulled up to sit, he may provide all the muscle power, only needing only his caregiver for balance. When he learns balance, he will be able to sit up by himself.

Standing comes later than sitting or crawling. Babies cannot control their legs until they have acquired control over their backs and hips. But their efforts start early. Held in a 'standing' position on the caregiver's lap, a three month old baby soon begins to take a tiny proportion of his own weight. He pushes down on his toes and practices straightening his knees. By four to five months the knee-straightening becomes rhythmical and feels as if he were jumping. Standing on an adult's lap gives him a chance to gaze into faces and a delightful view of a world that moves as he jumps.

Movement Milestones in the First Six Months

Raises head and chest when lying on the stomach
Supports upper body with arms when lying on the stomach
Stretches legs out and kicks when lying on the stomach or back
Opens and shuts hands
Pushes down on her legs when her feet are placed on a firm surface
Brings hand to mouth
Takes swipes at dangling objects with hands
Grasps and shakes small objects
Rolls both ways (front to back, back to front)
Sits first with support of her hands, then without
Supports her whole weight on her legs
Reaches with one hand
Transfers objects from hand to hand

Using the senses

Seeing and understanding

To help learn to manage a complex world, babies have a built-in interest in faces and complicated shapes and patterns. During the first six months, babies begin to understand the things they see. They learn to distinguish one object from another and reach for things – adding action to looking.

Smiling, which starts at about six weeks, shows that the baby recognises those closest to him. By three months, he not only smiles more readily at familiar things and people, but definitely knows and prefers his caregivers. He is not yet frightened of strangers and accepts their attention. Before he reaches six months of age, he is already showing signs of emotional attachment to specific individuals.

Some developmental achievements take longer than others. For example, it takes a baby longer to discover his own hand than to recognise a familiar face. Faces are within sight many times a day, but hands are usually out of sight and out of mind until he 'discovers' them. A six-week-old baby finds his hands by touch. He grasps one with the other, pulls on it, opens and shuts his fingers. But even at eight weeks he does not know his hands are actually a part of him. He uses one hand to play with the other as if it were an object. By two and a half months the baby begins to watch his own hands when they happen to

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come into view. He is still very near-sighted but is now much quicker to focus his eyes on things shown directly to him.

It is fascinating to observe the baby's learning methods. Take reaching for an object like a toy. By three to four months he typically looks at an object, looks at his own nearest hand, lifts the hand toward the object, measures the distance by eye, and then repeats this process until he actually manages to touch the object. Usually he does not quite reach. He almost always misjudges and closes his hand before it gets there. Stable objects are better than swinging ones at this point, as the baby is no longer happy just to hit at things. If they swing away he will become very frustrated.

By four to six months the baby can focus on objects at almost any distance and follow them with his eyes in any direction. Gradually he stops needing to look back and forth between the object he wants and his own hand. He now knows where his hand is and only needs to keep his eyes on the object. By six months, he will lift his arm and hand and reach straight to the desired object. During this period he also learns to grasp what he touches. He keeps his hand open until it makes contact and then closes it around the object. Or he will reach for a large object with both arms open and succeed in clutching it to himself.

If given interesting things to look at, the baby will quickly learn to reach for them without first looking at his hand. He needs and enjoys lots of practice in learning these important new tasks. Care should be exercised about the objects within his reach, since everything he gets hold of will go into his mouth. Babies feel and learn about things by placing them in their mouths.

Seeing and Understanding Skills at Six Months

Develops full colour vision

Distance vision matures

Ability to track moving objects matures

Finds partially hidden object

Explores with hands and mouth

Struggles to grasp objects that are out of reach

Hearing and early sounds

By the fourth or fifth week, babies begin to associate sights with sounds. For example, they begin to smile in response to the caregiver's voice alone. During the second month the baby begins to react to a wider variety of sounds than before. A crash will make him jump, music will soothe him, but sounds in the neutral range become important too. Only voices seem to please him consistently, whatever the circumstances and whatever his mood.

Because babies have a built-in interest in the human voice, it is not surprising that their own **first deliberate sounds** usually occur in a social situation. Those contented gurgles made soon after birth are not deliberate. But by around six weeks a baby responds to a smile by smiling and making sounds. While watching an animated face he grins, kicks and makes small explosions of sound.

> *Talking to the baby is very important. Babies who are talked to a great deal are more talkative, while those who are usually cared for in silence have much less to 'talk about'.*

These early vocalisations are not 'talk' in the true sense of the word, but they indicate how much the baby is deliberately trying to communicate with the important people in his little world. He is using a voice as a means of interacting with his caregivers. If the mother or caregiver say something, he waits until he or she stops and then make some more noises. This conversational rhythm occurs only in response to the human voice.

By the third month babies begin to babble and life seems very exciting. Initially, babbling amounts to no more than vocal play as babies discover the wealth of sounds they can make with their tongue, teeth, palate and vocal cords. They practice making these sound combinations endlessly, much as they practice grasping objects or rolling over. They even produce sounds they have never heard before and that they will not use when they learn to speak. Infant babbling during the first year of life is the same all over the world, whether the baby is a member of a family that speaks English, Chinese or Hindi. As the capacity for babbling is built into the developmental script, even badly neglected or deaf infants will babble.

It is very important to make sure that a baby gets plenty of social talking. For example, the caregiver should point at things and name them. He or she can also tell the baby what is happening whenever he is handled. As he is undressed, he can be told the various parts of his body.

Language Skills at Six Months

Responds to own name

Begins to respond to *'no'*

Distinguishes emotions by tone of voice

Responds to sound by making sounds

Uses voice to express joy and pleasure

Babbles chains of consonants

It is also helpful to ask him questions. He will answer through various expressions, intonations and gestures. At this stage, the caregiver should talk naturally, without over-simplifying what is said. It is most important of all to listen, understand and respond to his language. If given the chance, babies will find ways communicate what they need and just how they feel.

Playing and learning

play is anything that stimulates their bodies and their senses to develop thinking and intelligence.

For babies play is more than fun. Play involves using all the senses. It means endless investigation of the way things feel and the way they move. Play means learning and finding things out – like where *'me'* ends and *'you'* begins. **Play is anything that stimulates their bodies and their senses to develop thinking and intelligence.** Babies get some fun out of everything that is done to them, from feeding to bathing.

It is important to adjust the kinds and timing of play activities to the baby's moods and temperament. Like everybody, he enjoys different things in different moods. The right levels of stimulation and novelty differ for every baby. The stimulation should be just enough to make him notice but not enough to overwhelm him and make him withdraw. Rough games make some infants squeal with delight but frighten others. That is because babies differ in their receptivity to loud noises, degree of fear, quality of shyness and level of physical activity.

> *All babies are different. That is why it is exciting for parents to keep discovering all the ways that make this baby special.*

Between three and six months babies are most alert to and interested in things which are familiar but also a bit new. Objects which are entirely familiar soon become boring. The baby has found out all about them and has no more to discover.

Throughout this period people are the baby's best playthings. The caregiver's body is his gymnastic equipment. Its muscles supplement his so that he can do a thousand things he cannot do alone. The caregiver's attention is the basis of the best kind of play.

Gradually, however, the baby needs and wants to learn about his world and the things in it. He needs objects that are colourful and have a variety of shapes, weights and textures.

During these months, babies become very efficient at reaching out to touch objects but have trouble picking them up. It is only in the second half of the first year that a baby learns to use his fingers and thumbs separately. In the meantime, he approaches things with two hands, trapping a desired object between his wrists and scooping it up with his palms. Everything is explored by mouth and the baby's control is limited. He cannot yet choose between several objects nor can he release objects on purpose. If a new object is offered, he drops the one in his hand.

Crying and comforting

All infants occasionally cry and seem to be mildly distressed for no readily identifiable cause, especially during the first two and a half months of life. This distress generally referred to as fussiness, often peaks in the evenings for reasons not yet understood. The baby's repertoire of cries increases and can be distinguished by differences in volume, pitch, and rhythm. In addition to the basic hunger cry there is also a grumbly cry which says *'I don't seem to be very happy right now.'* Soon afterwards, an angry cry can also be identified.

Some babies cry more and are less content than other babies. While some babies are easily soothed, it may be difficult to distinguish the need to suck from the need to feed. Babies can be comforted by sucking their own hands and fingers. If he is going to suck something, his own hands are best. They are always available no less hygienic than anything else.

Very active babies are frustrated by the restrictions of wrappings and covers. Even with freedom to move around, babies become bored and lonely if left alone too long. Babies need interesting things to look at, reach for and eventually touch. New or unusual objects will do a great deal to keep a baby happy, but they are not adequate substitutes for people. People and their activities fascinate a baby. He loves to observe and 'participate' as much as possible. No matter how tedious or repetitive an everyday activity or household task may seem to an adult, a baby will find it stimulating.

All babies tend to quiet down when they are being handled or carried. Everyone who cares for babies notices this effect. But why does it happen?

holding babies to the shoulder is by far the most effective way to stop them crying

Researchers have compared the different ways that parents hold and carry crying babies: they may carry them as they lie face down, sit them up, or pick them up and hold them to the shoulder or the breast in an embrace. The researchers found that holding babies to the shoulder is by far the most effective way to stop them crying. An added benefit when babies are held to the shoulder is a better view: they are more likely to pay attention to their surroundings.

Other methods mothers use to calm crying infants include rocking, patting, cuddling and swaddling. All these techniques either provide constant or rhythmic stimulation or reduce the amount of stimulation the babies receive from their own movements. Swaddling for example, which involves wrapping babies tightly in a blanket so that they cannot move their arms and legs, does both. The cloth provides them with constant touch stimulation and restricts their movements. This reduces the amount of stimulation they receive from those movements. Of all the techniques that provide continuous stimulation, researchers have found that swaddling is by far the most effective way to soothe a baby.

Another commonly used and very effective way to calm crying babies is to give them something to suck on. Sucking provides the baby with regular and rhythmic stimulation of the mouth. This apparently relaxes both the stomach and the major muscles and reduces the baby's random thrashing.

Developmental Health Watch

Because each baby develops in her own particular manner, it is impossible to tell exactly when or how a child will master a given skill. Developmental milestones simply give a general idea of the changes to expect. A baby whose development takes a slightly different course should not give immediate cause for alarm. However, a baby who shows any of the following signs of possible developmental delay during this period should be seen by a health worker.
Refuses to cuddle and shows no affection for her primary caregiver

One or both eyes consistently turns in or out

Has difficulty getting objects to her mouth

Does not roll over in either direction by five months

Does not smile spontaneously by five months

Cannot sit without help by six months

Does not smile or make squealing sounds by six months

Does not actively reach for objects by six to seven months

Does not bear some weight on legs by six or seven months

Does not babble by eight months

5 The infant: from six months to one year

Introduction

In the second half of the first year, babies begin to gain control over their bodies. They can sit alone, crawl about and get hold of anything left within reach. They discover fascinating things to do with these objects and need continual attention both for safety and emotional reasons.

At this time, babies become more attached to their caregivers. They have an abundance of love to give and have many people that are special to them. No matter how many people they become attached to, they always select one – usually the primary caregiver – as the most important and critical relationship.

This can lead to certain problems. While at six or seven months all the signs of a baby's devotion are positive, at about eight months he tries to keep the primary caregiver in sight every moment of the day. He becomes panic-stricken when removed from the primary caregiver.

Psychologists call this reaction 'separation anxiety'. Babies of this age do not understand the concept of time. When someone is out of sight, they therefore appear to be gone forever. The baby registers an absence but cannot hold the image of the person in his mind so as to wait calmly for their return.

Fortunately over the next few months he begins to grasp the meaning of 'object constancy'. Object constancy allows him to understand that people and things do not cease to exist just because he cannot see or hear them. With experience he learns that the people he cares about will return.

Anxieties about being away from his caregiver and being with strangers are real fears. Like other fears they will eventually be outgrown if the baby has confidence in his home and relationships. With these as a base, he will be less bothered by anxiety. He will be ready to use his growing skills to explore an ever challenging environment.

What Parents Can Do: Separation Anxiety

Infants between eight and twelve months may sometimes seem like two different babies. First, there is the one who is open, affectionate and outgoing. But then there is another baby who is anxious, who clings, and is easily frightened by unfamiliar people or objects. Some people may tell you that your child is fearful or shy because you are spoiling her. Actually, these very different behaviour patterns result from a new ability to tell the difference between familiar and unfamiliar situations. The anxiety of this period is, therefore, evidence of healthy relationships with the people closest to her.

Anxiety around strangers is usually one of the child's first emotional milestones. The caregiver may think something is wrong when this child becomes tense when strangers get too close. After all, at only three months, she interacted calmly with new people.

This pattern is normal for this age and not a cause for worry. Even relatives with whom the baby was once comfortable may now prompt her to hide or cry, especially if they approach suddenly.

At about the same time, she will become much more 'clutchy' about leaving her mother/caregiver (you).

This is the start of separation anxiety.

Just as she is starting to realise that each object is unique and permanent, she will also discover that there is only one of you. When you are out of sight, she will know you are somewhere, but not with her. This will cause her great distress. She has so little sense of time that she will not know when – or whether – you will be coming back.

Once she gets a little older, her memory of past experiences with you will comfort her when you are gone, and she will be able to anticipate a reunion. But for now, she is aware only of the present. So every time you leave her sight – even to go to the next room – she will fuss and cry.

How long can this separation anxiety be expected to last? It usually passes between ten and eighteen months, and then fades during the last half of the second year. In some ways, this phase of your child's emotional development will be especially tender for both of you while in other ways it will be painful. After all, her desire to be with you is a sign of her attachment to her first and most important person.

Growing and caring

Physical appearance

Growth continues to slow down during the second half of the first year. An ideal growth is about 55-90 grams per week with an overall height increase of 8-10 cm. Although babies in general follow this average, there is still quite a bit of variation. For example, because of an illness, the infant may not gain any weight for several weeks. Following a quick increase in weight, the baby will resume a pattern of normal growth.

Feeding

In general, as long as the baby has at least four full breast-feedings each day, he will obtain most calorie and protein needs from milk alone. Only the mother and baby can decide when is the right time to start weaning. A few babies will become bored with breast-feeding while others continue to breast-feed until well into their second year.

Weaning should take place gradually. A sudden refusal to let the baby suck from the breast can be particularly bewildering, especially if it occurs after a long period of continual breast-feeding. It is also easier for the mother when stimulation of the breast decreases slowly. Less sucking will result in less milk.

The average six month old baby needs about 800 calories a day. About three-quarters of these calories are obtained from breast milk. Therefore only about 200 calories are needed from solid food. As weaning progresses, babies drink less milk. Therefore, more solid food is needed to fill the calorific gap and provide energy for activity and growth. Babies get enough protein, calcium and vitamin B from milk. But they do not get enough iron or vitamins A, D or C.

Most of the foods that families normally eat are good and appropriate for babies

Ideas about which foods are suitable for babies will vary from country to country and from region to region within a country. **Most of the foods that families normally eat are good and appropriate for babies.** The best way to prevent problems over what and how much a baby eats is to create a relaxed and accepting attitude during feeding times.

Babies are designed for survival. They will not starve if offered milk and manageable solid foods in a comforting and responsive environment. If the caregiver looks and listens carefully, the baby will provide clues about how much food he needs. The baby's energy and vitality are keys. If he is lively and active, he is getting enough food.

Digesting

Once solid foods are added to breast milk, the baby's digestive system has to cope with food that moves more slowly through the intestines and contains more waste. Mucus in the stools means that the food is too coarse and needs straining. A sudden increase in sugar intake can also cause loose stools. Parents should be concerned if in addition to loose stools he seems unwell, refuses food, has fever or vomits. Rapid loss of fluid in young babies can be dangerous.

Sleeping

Until about six months of age, babies sleep when and if they need to. Nothing except hunger, illness or pain will keep them awake. Between six and nine months babies can be kept awake by excitement, tension or their own reluctance to release themselves from the world.

In terms of actual time spent sleeping, babies vary tremendously in their need for sleep. Some sleep relatively long hours while others tend to be relatively wakeful. These patterns tend to hold though the number of hours slept in a given day will decrease as the months go by. While eating and sleeping are still associated, babies may not necessarily fall asleep after each feeding.

A typical sleep pattern from six months to a year consists of a 10-12 hour night, broken by brief awakenings, and two separate naps during the day. Some of the night awakenings are due to external events such as noise and temperature change. However, most night waking in this age group results from disturbances within the baby.

It is not uncommon for difficulties over sleep problems to emerge between six months and a year. Babies can get so overtired that they cannot relax enough to go to sleep. It helps if they develop ways to comfort themselves such as sucking, cuddling a favorite cloth or object, or rhythmical movements such as twisting a lock of hair. This self-comforting behaviour provides babies with an independent source of security and make them less dependent on the adult world. But it may also prevent the baby from getting the kind of comfort which can only come from other people. At the most extreme are children who withdraw totally into a world of rhythmical rocking because the world of people and activity provides little satisfaction and comfort.

Teething

Teeth appear rapidly during this period. A first lower incisor, which appears around six months, is closely followed by its next door neighbour. At about seven months, most babies produce a top incisor and by eight months all four of these top front teeth appear. By nine to ten months the remaining two lower incisors appear, resulting in a row of four top and bottom teeth.

Few babies suffer more than fleeting and trivial discomfort while cutting front teeth. The sharp, flat shape of these teeth help them to come through more easily and readily than the larger, broader molars which come later. Make sure babies have plenty of objects to bite on as this will help to file down sharp points. These first teeth are not for chewing food and their arrival should not speed the process of weaning.

Learning to move

Most six month old babies give the distinct impression of being at ease with their bodies. They can use all four limbs smoothly and rhythmically. They enjoy physical movement for its own sake and struggle to roll over or to lift their heads and shoulders from the floor. **Muscular control starts at the top and moves downward.** At this stage of development, therefore, the upper half of the body is well ahead of the lower half. Babies can use their arms and hands to reach out accurately, and they can use their heads to follow moving objects with their eyes. But they do not yet have similar control over their hips, knees and feet.

Sitting

Sitting requires constant practice before he can carry out important tasks in this position

At six months, babies planted firmly in the sitting position will usually stay for a short time before toppling over. At seven or eight months some babies try to balance by leaning forward with their hands on the floor in front. By eight months, the baby is almost capable of independent balance without either adult support or his own hands. But even now he will sit more for practice than for practical purposes.

Crawling

Many babies learn to crawl at the same time that they learn to sit alone. If a desirable object is put out of reach of a six month old, he will pull his knees up under him, push with his hands and often manage to get his tummy right off the floor. But often he will not actually succeed. Just as babies have difficulty balancing, moving forward takes time and practice.

During the seventh and eighth months, most babies show a desire to crawl. At first it may be backwards crawling as infants push more efficiently with their arms and hands than with their feet and legs. Frustrating as this may be, once he crawls backwards he will soon get his direction and the power to push himself. By the ninth month most babies can crawl forward.

different rates of development or unusual ways of getting around do not suggest that there is anything wrong

Delayed crawling is nothing to worry about if the baby shows interest in pulling himself up to the standing position. Although crawling usually means progress across a room on hands and knees, many babies adopt other manoeuvres either before or instead of a conventional crawl. Some babies learn to crawl in the ordinary way but then discover that they can move faster on hands and feet than they can on hands and knees. **Different rates of development or unusual ways of getting around do not suggest that there is anything wrong.** The baby must learn to sit alone and eventually to stand and walk, but how and when he gets around in between are far less important.

Standing

While learning to sit up and to crawl often go together at about nine months, standing and walking are parallel accomplishments. At six months most babies love to jump by bending and straightening both knees together. During the seventh month they begin to use alternate feet instead of both together. But they still cannot bear their full weight or think about moving forward.

It is not usually until nine months that a baby begins to understand that his feet will help him move forward. By ten months, his muscle control has moved downward to his knees and feet. At last he can take his full weight, standing squarely on his flat feet, keeping his knees braced. He can now stand up but cannot balance. Once he can take his full weight and stand squarely on the floor, he will soon learn to pull himself up to a standing position while holding on. Most babies will do this before the end of the first year.

Just as newly crawling babies may find it difficult to move forward rather than backwards, newly standing babies find it impossible to sit down again. But a little experience will soon give them the confidence to let go with their hands or lower themselves by sliding their hands down for support.

Given the opportunity, babies will pull themselves upright as soon as they are ready. Many of these adventures lead to falls which hurt their confidence. Later on babies learn to put out their hands as soon as they feel themselves falling. Thus standing and eventually walking alone depend on the baby's confidence and motivation and the level of muscle development and co-ordination. Although some babies will pull themselves up and toddle around before their first birthday, a majority will not get up on their two feet until the second year.

Finger skills

By six months, babies have found their hands and can use them to wave, reach and grab objects. But there is still much to learn. Fine hand control depends on the kinds of objects and opportunities the baby is given for practice. At six to seven months, the baby begins to understand that hands can be used to explore objects in ways other than grabbing, holding and putting them into his mouth. Sometimes he will use his hands simply to touch or pat objects that he cannot grasp.

At six months, babies behave as if their arms and hands are single units. By eight or nine months, sweeping arm movements are transformed into a range of gestures. For example, he is able to wave goodbye from the wrist only. At six months, objects are grasped with the whole hand or scooped up by a cupped hand. Large objects are tackled by using both hands together as if they were a pair of tongs. During the seventh and eighth months, the baby begins to use his fingers and thumbs for grasping and holding objects. By nine months, fine motor control is achieved so that an index finger can be used to point or poke.

During the last three months of the first year, the baby develops a more mature grasp and grip. He learns to use his forefinger and thumb to pick up small objects. This capacity is known as the **pincher grasp**. At nine months most babies understand the concept of letting go. But the actual process of uncurling fingers in order to release an object is very difficult. This discovery comes in the tenth or eleventh month and once achieved, the baby will practice letting things go at every opportunity.

Babies should be encouraged to use their hands to explore a wide range of objects. All new experiences are fun and full of learning opportunities. More complicated objects should be offered as babies begin to use their fingers and thumbs separately.

Towards the end of the first year the baby will stop simply dropping things and learn to place and throw objects as he likes. Give him light balls to throw and collections of shells or other small objects which he can put into a container and empty out again. These will provide an endless amount of pleasure.

Much early learning takes place through watching and imitating. So it is important that the baby observes how adults use their hands. As his manual skills increase, the baby can be shown how to do helpful things like feeding himself, washing his own hands and pulling off his clothes.

Milestones in Finger Skills at 12 Months

Uses pincer grasp
Bangs two cubes together
Puts objects into container
Takes objects out of container
Lets objects go voluntarily
Pokes with index finger
Tries to imitate scribbling

Listening and Talking

The second half of the first year is crucial for early language development. This is true even though many infants will not produce recognisable words before their first birthday. **Babies understand language long before they can use it to speak.** First they must listen to other people speaking and learn to understand what they mean.

The importance of listening and understanding is often underestimated. By contrast, the importance of the baby's own language production is often overestimated.

What Parents Can Do: Talking to Babies

The best way to help a baby's language development is to talk and listen to her as much as possible. Some things to keep in mind when speaking to babies include:

• Talk directly to the baby.

• Make sure to use key label-words when speaking. The baby learns by singling out label-words which continually recur in different sentences. The baby's own name is a critical label-word.

• Talk to the baby about the things that are physically present so that she can see what is being talked about; point out and name objects for her. This helps her make an immediate connection between the object and the recurring key word.

• Talk about things which the baby seems to be interested in. Even if she does not understand everything that is said, she will pick up the subject and perhaps some key words. Use gestures and expressions, frequently. The meaning is much clearer if things are pointed to when speaking.

• Try to understand the baby's 'made-up' words. This will help motivate her to try to speak more frequently. It is not important to correct her or try to make her repeat the word properly. She does not really want to say the same thing correctly; she wants to say something new. As her language capacity is not yet fully developed, her own word is the best she can offer.

To progress, babies need to listen a great deal. They need opportunities to grasp the meaning of words and the caregiver's recognition of the sounds they make.

During their first year, babies participate in complex forms of social communication with caregivers without using words. What gives them a sudden need for words? Pleasant emotions may be the key to early speech development.

Babies are born with a built-in interest in the human voice and an innate tendency to produce babbling sounds of their own. In the middle of the first year, most babies carry on long babbling conversations with adults. Through these conversations, babies learn the rules of taking-turns, a pattern that includes making a sound, pausing in order to allow the other person to reply, and then answering back again. Most of these early vocalisations are single syllable coo-like sounds, such as *Paa* and *Maaa* and *Booo*. As these conversations tend to be happy most babies will not talk if upset or crying.

During the seventh month, the baby becomes increasingly alert to speech sounds. Cooing becomes repetitive and includes sounds that resemble two-syllable words, such as *Ala*, *Amam*, *Mummum* and *Booboo*. Gradually these words become differentiated and are followed by new sounds like *Imi*, *Aja* and *Ippi*. The baby becomes increasingly pleased by his own sound-making and will go on entertaining himself with these new skills.

By the eighth month, babies want to participate actively in adult conversation and will often shout for attention as if they want to join in the conversation. In the ninth month, several exciting speech developments seem to occur all at once. The baby's speech suddenly become more elaborate as long drawn out series of syllables, such as loo-loo-loo, are produced. Soon after this, syllables are combined into long complicated 'sentences' such as Ah-dee-dah-boo-ma.

Language Milestones at One Year

Pays increasing attention to speech
Responds to simple verbal requests
Responds to *'no'*
Uses simple gestures, such as shaking head for *'no'*
Babbles with inflection
Says 'dada' and 'mama'
Uses exclamations, such as *'Oh-oh!'*
Tries to imitate words

The appearance of this type of expressive, fluent, varied jargon signals that word production is on its way. Caregivers who listen and reply to these early language skills are providing the stimulation that babies need most.

Most babies are able to produce their first real words by the tenth or eleventh month. During this time they are capable of using a particular sound to refer to a specific object. The sound may not be the true word, but their 'own word' or a

sound the baby has invented. This is because the early capacity to make words does not occur simply through imitation but includes invention as well. Words are learned by hearing them over and over again in different sentences and with varying tones of voice, facial expression, and body language.

> ***Word production*** *comes slowly, at first, but the baby's* ***ability to understand*** *words proceeds at a rapid pace.*

Playing and learning

In the second half of the first year, babies learn to sit up, move around and stand on their two legs. Each accomplishment requires an enormous amount of energy and practice. Fortunately, all babies have an innate drive to succeed. A baby who can crawl will crawl, and nothing will prevent him from doing so. These new physical achievements bring a tremendous amount of independence. The baby no longer has to rely on adults to bring the world to him. However, along with this new **physical independence** comes increased **emotional dependence**. The baby wants and needs constant emotional support and encouragement as he learns the difficult and exciting lessons of growing up. **Many of these lessons are best learned through play.**

Objects that match a baby's developmental stage but offer just the right amount of challenge and novelty are particularly pleasurable. For example, once he can crawl he will enjoy things that roll along. He will crawl after them, learning to push and chase them. Once he learns to let things go voluntarily, two kinds of games become possible. He will enjoy throwing things, and he will also find pleasure in putting things into containers and emptying them out again. As he learns about cause and effect, he will begin to enjoy simple musical instruments such as a drum. He likes the sound but he also likes the fact that he produced it by his own action.

During play an eight month old is curious about everything, but has a very short attention span. He will move rapidly from one activity to the next. Two to three minutes are the most he will spend with any one object. By 12 months, he will be willing to sit for as long as 15 minutes with a particularly interesting object, but most of the time he will still be a child in active motion. Ordinary household objects seem to hold a particular attraction. Babies at this age are especially interested in things that differ just a bit from what they already know. Small changes in familiar objects help them detect small differences between the familiar and the unfamiliar.

As soon as babies begin to crawl, they are off in search of new things to conquer. They will never get tired of dropping, rolling, throwing, submerging or waving objects to find out how they behave. **This is the child's way of finding out how the world works.** Like a good scientist, he observes the properties of objects and develops ideas about shapes, textures and sizes.

His observations at this time also help him to understand that objects continue to exist even when they are out of sight. This concept is called '**object permanence**'. At eight months, when an object is hidden under a cloth, he will search for the object under the cloth – an unlikely response just three months earlier.

As the first year comes to an end, the child becomes increasingly conscious that things not only have names but particular functions as well. For example, instead of treating a brush as an interesting object to be held or banged, he will try to use it to comb his hair, just as he has observed.

Playing and Learning Skills at One Year

Explores objects in many different ways (shaking, banging, throwing, dropping)
Finds hidden objects easily
Looks at the correct picture when the image is named
Imitates gestures
Begins to use objects correctly (drinking from a cup, brushing her hair)

Crying and comforting

Most babies cry less in the second half of their first year than they did earlier. They seem better able to cope with everyday life. Sudden loud movements now make them laugh instead of cry. Displeasure, worry or alarm are expressed through facial expressions and whimpering sounds. Although babies cry less readily and less often than before, various aspects of their development will lead to considerable crying if they are not understood.

For example, while more confident about life in general, it is not uncommon for babies at this age to develop intense fears about one or two things, for example, the dark. These fears, while often completely irrational, should be accepted and respected. Babies also build up expectations based on the routines, rhythms and rituals which have been established in their daily life. When such expectations are not met for some reason, babies become afraid. If novel or unexpected things occur, it is important to recognise the effect this may have on the baby. With time his horizons will broaden and he will welcome new experiences which enrich the fabric of his life.

if the caregiver is sensitive to cues, such as facial expressions, that are more subtle than crying, the baby will not cry so often

Babies have strong emotions but very little control over them. Their loves, hates, wishes and desires are as strong as those of adults. But without language and physical mobility they can do little about them. Thus, they cry in the face of situations that they cannot do much to change. This is a signal for the caregiver to take action. If the caregiver is sensitive to cues, such as facial expressions, that are more subtle than crying, the baby will not cry so often.

On the other hand, growing independence helps counteract feelings of helplessness. A crawling baby can go where he wishes and get what he wants.

At the end of the first year, therefore, crying from helplessness is replaced by cries of frustration and anger. In any given day, these are the main cause of tears. For the crawling, exploring baby gets himself into continual trouble. He has to be checked both for his own safety and care of others' possessions. As he is too young to understand restrictions or remember warnings, it is not always possible or desirable to prevent this kind of crying. As 'frustration' occurs when the baby does not get his way, a certain amount of frustration is inevitable.

A baby must be restrained when his intentions are unsafe or destructive even if he gets angry and frustrated in the process.

Babies want to try difficult tasks. If they are to forge ahead in development, a balance is needed between freedom and frustration. Too many restrictions will inhibit development – but too much freedom will endanger the baby's safety. Therefore the caregiver must judge whether he can learn from a given situation or whether he will just find himself in a fury of frustrated crying.

Older babies have different levels of frustration tolerance. A setback that leaves one baby screaming leaves the next smiling. Caregivers cannot do much about these innate differences. They can simply accept them and learn to anticipate them.

While some children will cry more readily than others it is important to note that the overall amount of crying is a rough index of contentment.

Apart from pain, illness or hunger, crying is either a reaction of fear, a signal to take action, or an explosion of frustration and anger. If caregivers understand which emotions seem to be causing most of the crying, helpful responses may be easier to discover.

Developmental Health Watch

The following kinds of behaviour may indicate a possible developmental delay. If a child shows one or more of these at 12 months, a health worker should be consulted:

Drags one side of the body while crawling (for over one month)
Cannot stand when supported
Does not search for objects that are hidden while she watches
Says no single words (such as *'mama'* or *'dada.'*)
Does not learn to use gestures such as waving or shaking her head
Does not point to objects or pictures

What Parents Can Do: Toddlers on the Go

The baby's desire to explore is almost impossible to satisfy. As a result, she will want to touch, taste and manipulate everything she can get into her hands. In the process, she is bound to find her way into places and situations that are off limits. Although her curiosity is vital to her overall development and should not be discouraged unnecessarily, she cannot be allowed to jeopardise her own safety or damage valuable objects. Keep in mind that the way you handle these early incidents will lay the foundation for future discipline. Learning not to do something that she very much wants to do is a major first step toward self-control. The better she learns this lesson now, the less you will have to intervene in years to come. What is the best strategy? Here are some helpful suggestions.

• Distraction can often deal effectively with undesirable behaviour. Your baby's memory is still short, and thus you can shift her focus with minimal resistance. If she is headed for something she should not get into, you do not necessarily have to say no. Instead, pick her up and direct her toward something she can play with. Look for a compromise that will keep her interested and active without squelching her natural curiosity.

• You should reserve serious discipline for those situations where your child's activities can expose her to real danger. This is the time to say no firmly. But do not expect her to learn from just one or two incidents. Because of her short memory span, you will have to repeat the same scene over and over before she finally recognises and responds to your directions.

• To improve the effectiveness of your discipline, consistency is absolutely critical. Keep the rules to a minimum, preferably limited to situations that are potentially dangerous to the child. Then make sure she hears 'no' every time she strays into forbidden territory.

• Immediacy is another important component of good discipline. React as soon as you see your baby heading into trouble, not five minutes later. If you delay your reprimand, she won't understand the reason you are angry and the lesson will be lost. Likewise do not be too quick to comfort her after she has been scolded. Wait a minute or two before you reassure her. Otherwise, she will not know whether she really did something wrong.

• As you refine your own disciplinary skills, do not overlook the importance of responding in a positive way to your baby's good behaviour. This kind of reaction is equally important in helping her learn self-control. If she hesitates before reaching towards something hot, notice her restraint and tell her how pleased you are. And give her a hug when she does something nice for another person. As she grows older her good behaviour will depend, in large part, on her desire to please you. If you make her aware now of how much you appreciate the good things she does, she will be less likely to misbehave just to get your attention.

• Some parents worry about spoiling a child by giving her too much attention, but you should not be concerned about that. At eight to twelve months your baby still has a limited ability to be manipulative. You should assume that when she cries, it is not for effect but because she has real needs that are not being met.

6 The toddler: from one to three years

Introduction

Children's behaviour becomes dramatically more complex between the ages of 12 and 30 months. Physical and mental changes include:

- increased sophistication in reasoning about the world of people and objects
- emerging ability to imitate, communicate and engage in pretend play
- new social relationships between children and their caregivers.

Each of these accomplishments is interesting in its own right. More significantly, each is a single thread in a tapestry, creating a distinctive individual personality. About the time that infants celebrate their second birthday or soon thereafter, these changes combine to create a new stage of development.

Growing and caring

Physical appearance

The growth rate begins to slow down by the end of the first year. From now until the next growth spurt occurs in adolescence, the toddler's height and weight increase steadily, but not as rapidly as during those first months of life. As an infant he may have gained 1.8 kg in four months or less. But during the entire second year his total weight gain will probably be 1.4 to 2.3 kg. As the child gets older, the weight range considered 'normal' gets broader.

At 15 months, the average girl weighs about 10 kg and is almost 77.5 cm tall. The average boy weighs about 10.4 kg and is also 77.5 cm tall. Over the next three months they will each gain approximately 0.7 kg and grow about 2.5 cm. By two, she will be about 86.4 cm tall and weigh 12.2 kg; he will reach 86.4 cm and weigh almost 12.7 kg.

The toddler's head growth slows dramatically during the second year. Although he will probably gain only about 2.5 cm in circumference the entire year, he will have attained about 90 percent of his adult head size by age two.

Toddlers change in appearance during this period. At one year, for example, infants still look like babies even though they can walk and speak a few words. The head and abdomen are still the largest parts of the body and the legs and arms are still relatively short and soft rather than muscular.

As infants become more active, develop muscles and trim away some baby fat, all this changes. Gradually, the toddler's arms and legs lengthen and the feet start to point forward as he walks instead of out to the sides. His face becomes more angular and his jawline better defined.

These changes in overall size are accompanied by important changes in the structure of the brain that affect the toddler's psychological capacity. For example, during the second year new links are formed. Centres in the brain responsible for emotion become more closely linked with those responsible for information about sights and sounds. As a result, more complex skills emerge, including self-awareness, planning and problem solving, voluntary control of behaviour and acquisition of language.

Different areas of the brain reach similar levels of development at this stage. Although the brain continues to develop at a slower pace for at least another ten years, much of the structure that supports adult behaviour is present by the end of the second year. Developments seen in later childhood are largely refinements of existing structures.

Feeding

The toddler's appetite falls sharply soon after his first birthday. He may suddenly become fussy about what he eats and turn his head after just a few bites. While he could be expected to eat more now that he is so active, there is good reason for his decreased appetite. His growth rate has slowed. He no longer requires as much food.

Toddlers require about 1,000 calories a day for growth, energy and good nutrition. While it is helpful to divide these calories into three meals and two snacks per day, this is not always necessary. The eating habits of toddlers are unpredictable as they like to choose from among a selection of nutritious foods. Taste and texture should be varied as much as possible. Above all, meal-times should not be turned into power struggles.

Toddlers require foods from the same basic four nutrition groups as adults:

- meat, fish, poultry
- eggs and dairy products
- fruits and vegetables
- cereal grains, potatoes, rice breads and pasta.

As the toddler can still choke on solid chunks of food that are large enough to plug the trachea (windpipe), food should be mashed or cut into small, easily chewable pieces. By the first birthday or soon thereafter, the toddler should be able to drink liquids from a cup and feed himself using a spoon and fingers. Between 15 to 18 months he will be much more in control, taking food in easily when he wants to.

Teething

The toddler will be 'teething' through almost the whole of the second year. The teeth which are most likely to cause discomfort are the first molars, which

Mental Development: The Foundations of Early Learning

The brain of the infant and young child is an active, growing dynamo. Brain cells begin to form as early as three weeks after conception, multiplying more rapidly than other body cells. Development of much of the brain's physical structure or 'hard wiring' starts during this period. The future thinking cells, called neurons, are produced in abundance from the second trimester (three month period) of pregnancy until six months after birth. The quality of development during this period determines the future structure of the brain.

At birth, the top layer of the human brain, known as the cortex, lies like a blanket over the lower areas. It is essentially an untraced surface. But the first two years are a period of dynamic growth for this layer.

As involvement with people and things increases, the new-born's brain begins to develop its folds and fissures, its surface area and its thinking power. At birth, in fact, the brain already contained most of its billions of cells, but these cells must become organised into systems for perception, thinking and remembering.

Although the number of cells remains almost the same, brain weight can double during the first year of life. How does this happen? The cells are supported by a growing mass of connections which link them into a complex message system. As stimuli from the senses are received and then passed on, the brain cell fires off a message which then builds new physical connections to neighbouring brain cells. The growth of these connections and the ultimate quality of a child's thought are dependent on the quality of her environment. If her brain does not receive sufficient stimulation, many brain cells will not develop at all.

Active interest and mental effort on the part of the child are critical. As the child responds to sights, sounds, feelings, smells and tastes, more connections between cells are made. The more work the brain does, the more it becomes capable of doing. Thus each child weaves her own tapestry, with the people and things in her environment providing the raw material for this masterpiece.

appear between 12 and 15 months, and the second molars, which appear between 20 and 24 months. While teething will not make a child ill, it may make him miserable and irritable and disrupt his sleep. The cheek may be red and warm on the affected side, and the very things that give comfort (such as sucking or biting) may also cause pain. Fortunately, the trouble with each tooth will only last a few days.

If the child seems to be in real pain, teething may not be the cause. At this time it is easy to confuse an earache with teething pain. A child who keeps putting a hand to the side of the face or who cannot eat or sleep should be taken to the health clinic.

Moving

As a result of the brain's maturation, the toddler has increasing motor control over his legs, arms, bladder and bowels. At about 12 months, most babies begin walking. With these first steps, babies become toddlers, a word that describes the typical way they use their legs – toddling from side-to-side with legs spread for stability. Most one year olds are unbalanced and fall often, but it does not stop them. The ground is not very far away! Walking is too exciting to give up, so they simply get up and rush ahead to the next tumble.

After the first few steps, many months pass before walking and other leg functions are well co-ordinated. Finally, about six months after the first steps, walking becomes more mature. Steps become smoother. Soon walking turns into a first attempt at running, but in short, stiff little bounds, always straight ahead. Well co-ordinated running does not usually appear until sometime during the third year.

Finger skills

Given the dramatic achievement of walking, it is easy to overlook changes in the ability to use hands, alone and in co-ordination with the eyes. With these new skills, the toddler examines objects with more control and precision. Co-ordination of fine hand movements increases significantly between 12 and 30 months.

For example, by one year of age, toddlers can only roll a ball or fling it awkwardly, but by the time they are two and a half years old, they can throw it. They can also accomplish many new tasks. They can turn the pages of a book carefully without tearing or creasing, snip with scissors, string beads with a needle, build a tower of six blocks with considerable ease, hold a cup of milk or a spoonful of rice without spilling and dress themselves as long as there are no buttons or laces.

While toddlers often demonstrate a clear tendency toward right or left-handedness, many children do not show a strong preference for several years. Other children are ambidextrous, able to use both hands equally well. Some of these may never establish a clear preference. There is no reason to pressure a toddler to use one hand over the other, or to rush the natural process that eventually leads to this preference. All of these motor accomplishments help the toddler to behave with increasing competence.

Milestones in Finger Skills by the End of the Second Year

- Scribbles spontaneously
- Turns over container to spill out contents
- Builds tower of four or more blocks
- Puts large square pegs into matching holes
- Makes shapes from clay

Speaking

Early in the second year the toddler seems to understand everything. This affects the way that adults speak to children. Responding to the child's developmental progress, caregivers replace their 'baby talk' and high-pitched singsong monologues with slow, short, clearly articulated, simple sentences. Although there are wide variations in children's language capacities, most have vocabularies of 50 words and can speak in short sentences by the end of the second year.

Understanding language is far more important to the toddler than the actual use of words. The toddler's first words are almost always labels – names of people, animals or things that are meaningful to him. Many children do not go beyond this labelling stage before the middle of the second year. New words are slowly added at a rate of one or two each month. But the toddler has a tremendous capacity for storage and understanding. Quite unexpectedly, he will be heard to have command of a whole new set of words. For example, a child who says only ten words at 18 months is likely to have a vocabulary of 200 words by his second birthday.

Early words almost always include things which are part of or directly concern the child. He masters the names of parts of his own body, followed by objects that are important to him. Often these early words are difficult to understand since toddlers often change or omit certain sounds. For example, he might get the first consonant (b, d, t) and vowel (a, e, i, o, u) sounds right, but drop the end of the word. Or he may substitute sounds he can pronounce, like d or b, for more difficult ones. Although these single words are all simple labels for familiar objects, he uses them in increasingly varied ways in preparation for the next stage of speech.

What Parents Can Do: Listening to the Toddler's Speech

The toddler's early sentences follow her own rules and may not be grammatically correct. It is important at this stage for parents and other caregivers to listen to and understand the toddler's efforts at communication rather than correct her early sentence structure. The following suggestions are helpful in understanding these early sentences:

• Listen to the order of the child's words. By rearranging the order of words, a child is able to convey different meanings.

• Listen to the way the child makes past tenses. Most English verbs are made into the past tense by adding a 'd' sound. The toddler extends the rule and says *'he goed'* and *'I comed'*.

• Listen to the way plurals are made. Most English words are made plural by adding an 's' or a 'z' sound. The toddler extends this logically to all words and says *'sheeps'*, *'mans'* and *'mouses'*.

Once these single words are used with varying intonations and meanings, toddlers begin to use more than one word at a time. A second word is added in order to communicate a more complex message. For example, the word ball now becomes *'John ball'* or *'more ball'*. These two-word phrases make it easier to understand the toddler's thought processes. For he is beginning to think – and speak – about people or objects not actually in view. These two-word phrases are soon followed by additional words and the beginnings of sentences.

Toddlers' early language skills are original telegraphic phrases developed from a desire to communicate interesting and exciting things. They are not imitations of adult speech. If given the opportunity, a child will speak his own language while listening intently to adult speech. The caregiver's quick and understanding responses to his early language efforts motivate him to continue.

The toddler should hear correct speech, as this is the model he will eventually use. However, during this early period, insistence on correct speech may delay further language development. The toddler is more interested in saying something new than in speaking properly.

Language Milestones in the Second Year

Points to objects or pictures when they are named
Recognises names of familiar people, objects and body parts
Says several single words (by 15 to 18 months)
Uses phrases (by 18 to 24 months)
Uses two- to four-word sentences
Follows simple instructions
Repeats words overheard in conversation

Thinking and learning

For toddlers, there is no separation between playing and learning – between things they do 'just for fun' and things that are 'educational'. The child learns while living and any part of living that is enjoyable is also play. Play materials are the child's tools. He uses them to find out about the world and gradually acquire the hundreds of skills expected from him as a member of adult society. Children play with whatever is available to them. They need materials that allow them to explore and experiment – anything will do including objects assembled from waste or scrap materials.

The toddler lives in the real world and understands only the here and now. He is not yet interested in the world of imagination. He cannot cope with the past or future as he cannot yet remember yesterday or plan for tomorrow. His challenge is to understand the people and things that come before his eyes.

He has already learned an enormous amount about the real world through his senses. He can recognise familiar objects even when he sees them at peculiar angles. He can recognise familiar sounds and knows his father's voice, for example, even when he is out of sight. His sense of touch is well-developed: if his hand touches his blanket, he knows it by feel alone. He will gather it to him without bothering to open his eyes. But his interpretations of the world are by no means always accurate. For him, the world is unpredictable and he is easily fooled by people and things which do not appear as he has learned.

Sometime during the first half of the second year, the child's new abilities come together. This helps him to learn faster and with greater ease. He is mobile. He can go and find new things. For example, the table seen many times before can now be viewed in a different way – from underneath.

He has mastered reaching, grasping and letting go. His gestures are highly expressive, allowing him to question and show surprise even without words. His need for sleep diminishes and he has more time to explore. When allowed to be free in a new environment, he moves around from object to object, looking, touching, tasting, smelling and listening. Because everything is new, he is not easily bored. He cannot have too much time to explore. He picks things up for the sake of picking them up, drops them because dropping things is fun and puts them in his mouth to understand them better. **In all of this, he is playing and learning.**

After months of exploring, the toddler begins to experiment. As he picks things up and puts them to his mouth, he tries to find out what can be done with them and what they taste like. He fingers, drops and squeezes things just to see what will happen. This experimentation gradually teaches him the rules that govern the behaviour of objects in the world. When he tips a cup of water, he gets wet; when he tips a cup of sand, he does not. The water soaks into his clothes but the sand rolls off when he stands up.

> *By discovering how different objects behave, the toddler also begins to recognise their similarities and differences.*

He begins to classify objects by colour, shape, and size. Gradually his ability to differentiate between categories of objects becomes more sophisticated.

For example, while a toddler learns to differentiate 'dogs' from all other objects, he also learns the name-label 'dog'. He first uses this word as a simple label for one particular thing – an individual dog. To understand the concept of 'dogs', he has to put all dogs – his own, dogs he sees in the park, picture book dogs and toy dogs – into a single category. The name-label 'dog' must be applied to the whole group. Once their thinking has reached this stage, toddlers spend a great deal of time practising these sorting and classifying skills in play.

The two-year old does not understand abstract concepts that describe invisible or unreal things. He may vaguely understand the meaning of 'more' or 'less',

he may understand 'soon', he cannot yet grasp more abstract time concepts, such as 'next week'.

As the ability for abstract thought evolves during the second year, he begins to think about familiar objects when they are not visible, to remember events from the past and make future plans. 'Out of sight' is no longer 'out of mind'. **During the toddler period, the capacity to retrieve a mental picture of an event and plan for the future begins to emerge.**

The beginning of abstract thought is reflected in the toddler's imaginative play. Through imagination, his play is filled with inventing and pretending. Given adequate space and time for play, his thinking skills will develop. Like a true scientist, he requires independence to work as he pleases, showing off his results only when he is finished.

Feeling and behaving

During the second year, the toddler develops a specific image of his social world, friends and acquaintances. He is at the centre of the world. While caregivers are important, he is mainly concerned about where people and objects stand in relation to himself. He knows that other people exist but has little understanding of how they think or feel. He thinks everyone thinks as he does.

As a result of this egocentric or self-centred view of the world, the toddler's play behaviour is not truly social. For example, he will play alongside and compete for play materials but does not understand how to play co-operatively with other children. He simply enjoys watching and being around other children – especially if they are slightly older. He likes to imitate them and may even offer them a favourite object – but gets upset if they accept. At this stage, 'sharing' is a meaningless term, since every child of this age believes that he alone is at the centre.

The toddler's increased sense of self-awareness will also be reflected in other ways. At about 18 months he will say his own name. At about the same time he will identify his reflection in the mirror and start showing a greater interest in caring for himself. As he approaches age two, he is able to wash his own hands and help get himself dressed and undressed. **Since toddlers learn through imitation, he likes to participate in the activities of those around him.** Caregivers should encourage the toddler's desire to be helpful. Helping, like sharing, is a vital social skill.

Temperament

Some children are naturally aggressive in ways that become evident in the second year. They want to take charge and control everything that goes on around them. When they do not get what they want, the may turn their energy towards violent behaviour like kicking, biting or hitting. Aggressive toddlers should be watched closely and given firm and consistent limits. If possible, this energy should be directed towards positive outlets such as play and exercise.

What Parents Can Do: Helping the Toddler Play and Think

While playing, a toddler wants to be near her caregiver and welcomes help and participation. She does not need or want to be told what to do. Her play is exploration, discovery and experiment. If her caregiver insists on showing the right way and telling her the answers, it spoils the learning process. The art of joining in a toddler's play is to let her be the leader.
The following suggestions may help to enrich and, at the same time, enjoy the toddler's play.

Give physical help. She is still very small and not yet in full control of her own body. Often she has a plan in mind but is frustrated by her inability to carry it through. The caregiver should lend co-ordinated muscles, height and strength – but let her discover the solutions.

Offer partnership. Some games require a partner and the caregiver is elected. The toddler cannot play chase if nobody will run after her. She cannot practice rolling and receiving a ball if no one else will play.

Provide suggestions. She will gladly welcome parental suggestions if they are offered carefully and at the right time. If she is playing with sand, show her how to build a castle. She may or may not want to try, but do not interfere with her own plan.

Help her to concentrate. She will find it difficult to work for more than a few minutes at a time on difficult tasks – especially if she needs to sit still. Sit with her, talk, support and encourage her. This may help her go on longer. Perhaps even long enough to have the satisfaction that accompanies the completion of a challenging, self-imposed task.

Help her to share with other children. She is not ready to play with other toddlers but will get great pleasure from playing alongside them. They are not old enough to be left to 'fight their own battles', 'play fair', 'take turns', or 'be nice to guests'. Parents should give them similar materials to play with and let each do what she wishes without interference. Each will play, pausing now and then to watch the other, enjoying each other's presence.

The child should be supervised when playing with other children and praised when he responds without aggression.

In some families, aggressive behaviour is encouraged, especially in boys. Parents may proudly call their child 'tough' and approve of behaviour such as kicking and biting. In other families, a child's aggressive outbursts are interpreted as an omen of future delinquency. Fearful of this behaviour, parents may hit or spank the child as punishment. However, a child treated in this manner learns a negative lesson: he learns that this is the correct way to handle people. This reaction may actually reinforce the child's aggressiveness towards others. **The best way to control a toddler's aggression is to be firm and consistent whenever he misbehaves.** Of course, setting a good example is always helpful.

In contrast to aggressive toddlers, some children are naturally fearful about new people and situations. They hold back, watching and waiting before joining a group activity. If pushed to try something different, they resist, and when faced with someone new, they cling to the familiar.

> *Challenging or ridiculing the shy child's behaviour will only make him more insecure. It is better to allow a shy child to move at his own pace.*

He needs time to adapt to new situations and should be allowed to hold a parent or caregiver's hand when he needs assurance.

Toddlers tend to live on an emotional see-saw with anxiety and fears at one end and frustration and tantrums at the other. Their feelings are new and powerful. Children have not had the time or experience to know how to cope with them. They cannot control themselves. These swings of emotions have led many to call this period the 'terrible twos'.

the desire to be independent, to shake off the absolute control of adults and to become a person in his own right is in conflict with his desire to stay a baby who can depend on protection from adults

Most of the toddler's troubles and fears arise from basic internal contradictions. The desire to be independent, to shake off the absolute control of adults and to become a person in his own right is in conflict with his desire to stay a baby who can depend on protection from adults. Day by day, hour by hour, the see-saw tips. It is important to keep this see-saw in balance by adjusting to rapidly changing emotional needs. This is a difficult task for caregivers, providing the delicate balance between care and giving the child autonomy.

Anxiety and fear

Anxiety and fear are normal but uncomfortable human emotions. Most adults learn to cope with situations which make them anxious or to avoid things which make them afraid. But toddlers have neither the experience nor the ability to do this for themselves. Moreover, it will be some time before toddlers can express their fears and say, *'Hold my hand. I am afraid of the thunder'*.

Caregivers can help toddlers handle their fears by watching and listening closely to all the clues to their feelings. For example, toddlers feeling a little anxious will often show the following signs:

- behaviour more clingy than usual, choosing to go with the parent or caregiver rather than stay alone; choosing to hold an adult's hand rather than to run ahead
- worry about strange places and people
- new or extra difficulty in going to sleep.
- nightmares.
- loss of interest in food.

children tend to be wary of new things until they have proved themselves harmless

It is important for caregivers to recognise and accept a toddler's fear as a true and valid emotion. **Children tend to be wary of new things until they have proved themselves harmless.** This is natural and self-protective behaviour. Since most things in the environment either provide this proof or go away, their fears often pass as suddenly as they appeared.

But some fears do not vanish so easily. Instead of coming to terms with the strange thing, making it part of the familiar world and accepting it, the toddler focuses more and more fear on it until it turns into a more intense fear, a phobia.

Phobias

Phobias are very common in small children and do not suggest anything unusual. The world is a frightening place to a toddler and there are many things he cannot yet understand. It is not surprising that some general fears become focused in this way. More than half of all children develop at least one phobia during their second and third years. Some frequent objects of phobias include dogs, insects, and loud noises as well as the dark – and the 'monsters' that live there.

A child's phobia is different from an ordinary fear. For example, a child who is simply afraid of dogs will show his fear only when he meets a dog. These fears usually vanish when the child discovers that dogs are not harmful. A phobia by contrast works on the child's imagination. He is not only afraid when he meets a dog, but he is afraid when he sees one in the distance, looks at a picture of a dog or even thinks about one. He not only tries to avoid going where he knows there are dogs but tries to avoid going where dogs might be.

Phobias do not respond to rational explanation. Because it is the child's own sensation of fear which upsets him, phobias must be handled indirectly. Caregivers should try to lower the child's general level of anxiety. Some suggested strategies include:

- parents and caregivers should help the toddler to avoid the feared object but be careful not to let their own behaviour suggest that they are also frightened of the object
- look for specific causes of stress and see what can be done to lessen the strain
- pay extra attention to the child. He may actually have become 'independent' sooner than is really comfortable for him.

Frustration

A sense of independence develops rapidly during the second year. The toddler no longer sees himself as part of his caregivers and wants to assert himself. But life is more difficult than he realises. He does not understand things very well and often wants to do things beyond his capability. His efforts towards independence inevitably lead to frustration.

The toddler's feelings about himself as a separate person and his sense of dignity are easily frustrated by both adults and objects. Objects often refuse to behave as he wishes because his muscular co-ordination is not always accurate. While a little frustration keeps the toddler learning, too much frustration results in a continuing sense of failure.

When acutely frustrated, the toddler is liable to extreme rages. **Temper tantrums** are the result of too much frustration just as phobias result from too much anxiety. Very few children reach their third birthday without ever having

experienced one. A tantrum is like an emotional blown fuse. It is not something the toddler can prevent. The frustration builds up inside until he is so full of tension that only an explosion can release it. During a tantrum, the toddler is lost to the world, overwhelmed by his own internal rage and terrified by violent feelings he cannot control.

While the behaviour exhibited during a tantrum varies widely between children, an individual child's pattern is usually consistent. He may rush around the room out of control, fling himself on the floor, writhing, kicking and screaming. He may scream and scream until he makes himself sick. He may turn blue in the face because he has exhaled so violently that he cannot breathe in again. For caregivers, these breath-holding tantrums are very alarming but it is quite impossible for him to damage himself since the body's reflexes will force air back into the lungs.

It is not easy being a toddler rocking wildly between anxious and angry feelings. Nor is it easy to be a caregiver during this period. However, by the time the child reaches pre-school age, the intensity of the emotional turbulence begins to diminish. His increasing size and competence reduce the amount of extreme frustration. Gradually he learns to express himself more clearly about the things he is thinking and imagining. With the help of language, he learns to distinguish between fantasy and reality. Once these skills are mastered, he begins to recognise the lack of reality of most of his fears as well as the necessity and logic of his caregiver's demands and restrictions.

Developmental Health Watch

Each child develops at her own individual rate, it is impossible to tell exactly when a particular child will perfect a skill. Developmental milestones give a general idea of the changes to expect as a child grows older, but do not be alarmed if a child takes her own course. A paediatrician or child health specialist should be alerted if a child shows any of the following signs of possible developmental delay during the second year.
Cannot walk by 18 months.

Fails to develop a mature heel-toe walking pattern after several months of walking, or walks exclusively on her toes.

Does not speak at least 15 different words by 18 months.

Does not use two-word sentences by age two.

Does not seem to know the function of common household objects by 15 months.

Does not imitate actions or words by the end of this period.

Does not follow simple instructions by age two.

Cannot push a wheeled toy by age two.

What Parents Can Do: Preventing Tantrums

In an effort to prevent tantrums, parents and caregivers can try to organise the toddler's life so that frustration stays within tolerable limits. Since conflicts during this stage are inevitable, strategies that prevent friction are critical. The following guidelines should help to minimise both the frequency and intensity of tantrums.
Parents and caregivers should:

• use a friendly tone of voice and phrase when asking a toddler to do something. A request is better than a command. It also helps to say 'please' and 'thank you'.

• not over-react when she says 'no'. For quite some time, she may automatically say 'no' to any request or instruction. What she really means is something like 'I'd like to be in control here, so I'll say no until I think it through, or until I see if you are serious'. Instead of jumping on her, answer her hidden challenge by repeating requests calmly and clearly. She should not be punished for saying 'no'.

• choose their battles carefully. She will not throw a temper tantrum unless pushed first, so she should not be pushed unless there is something worth fighting for.

• not offer choices where none exist, but do offer limited choices whenever possible. If independence is sometimes encouraged, she will be more likely to comply when it is necessary.

• avoid situations that have triggered a tantrum in the past.

• reward good behaviour with plenty of praise and attention.

7 The pre-school child: from three to six years

Introduction

Developmental change is slower in early childhood, the period from three to six years of age, than during the first two years. Children lose their baby fat, their legs grow longer and thinner, and they move around the world with increasing skill. They show extremes of behaviour – vulnerability and ability, logic and magic, insight and ignorance. Children at this age can talk in endless sentences but are keen listeners when an interesting story is being told. Their desires can often be satisfied with promises of later rewards, but They are prone to fears and combat their growing self-awareness of being small by wishful, magical thinking.

They are prone to fears and combat their growing self-awareness of being small by wishful, magical thinking

Despite their developing independence, three-year olds need assistance from adults and siblings. They cannot hold a pencil properly, or string a fishing net or tie a knot. They do not have the ability to concentrate for long periods of time without a great deal of support, and their games and conversations wander in many different directions. Pre-school children's thought processes include not only great awareness but also much uncertainty. Children during this period still understand relatively little about the world in which they live and have little or no control over it. They are prone to fears and combat their growing self-awareness of being small by wishful, magical thinking.

During the pre-school years, many cognitive-developmental changes take place. Before this period, infants do not distinguish between themselves and their effect on the world. Objects exist only when the baby is acting on them or perceiving them. At about the age of two, children become capable of **representation**, that is of thinking about the properties of things without having to act on them directly. This capacity marks the first level of what the Swiss developmental psychologist, Jean Piaget, has termed **the pre-operational period** (see below – Thinking and learning). At this level, the child can deal with only one representation – one idea or thought at a time.

At the second level of the pre-operational period, beginning at about four years old, children develop the mental ability to deal with more complex things.

During the pre-school years, the child moves through these two levels, building increasingly complex and sophisticated schemes. The egocentric, complex, magical thinking of infancy gradually gives way to more logical thinking and perspective taking, improved memory, and an ability to separate oneself mentally from one's immediate surroundings.

Physical appearance

During the first two years of life, children generally quadruple their weight and increase their height by two-thirds. This rate slows down between two and three years when children gain only about two kilograms and grow only about nine centimetres. Between the ages of four and six, the increase in height slows still further and children gain about two to three kilograms and grow six centimetres on average.

As a result of the slower growth rate, most three and four year olds seem to eat less food. While this causes alarm in some parents, the change in food intake is normal.

Although normal children follow the same growth pattern, there are wide individual variations. A child with a slow growth rate may continue to gain in height and weight until age 20 while a child with a fast growth rate may complete full growth by 16 years of age. If a child is energetic and active, with bright eyes and glossy hair, and is full of pep after a good night's sleep then it is likely that he is well nourished.

Children of this age become sturdier too. The number of bones in the hand, wrist, ankle and foot continues to increase until adolescence. All the bones of the body gradually grow and harden in size. The skull, which grew very rapidly in the first years, now grows more slowly. Between the ages of five and twelve, it grows only about three centimetres. A seven years old's skull is usually about 49 centimetres in circumference, and the average adult head is only 5-6 centimetres bigger.

Muscle size increases steadily in proportion to body weight until about the age of five when there is a spurt for about a year. This is followed by a slowing down of the circulatory and respiratory systems leading to increased stamina.

All the primary teeth have usually come through by about two and a half. Between three and five the face tends to grow proportionally more than the skull and the jaw widens in preparation for the permanent teeth. The spurt of growth in the jaw between five and seven brings about another change in appearance.

The first permanent teeth are the first molars. They usually appear when a child is about six but with wide individual variation in the timing. Once the molars are in place, the primary teeth begin to be shed, in roughly the same order as they first appeared. In most children, shedding of the primary teeth and eruption of the permanent ones take place at about the same time, but sometimes a child will have a temporary gap. Sometimes new teeth appear before the baby teeth have left a proper space.

Physical development of the pre-school child results from the interaction between individual hereditary factors and environmental forces. Abnormal growth patterns often reflect this interaction. **A striking illustration is 'the**

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a striking illustration is 'the failure to thrive syndrome' in which children suffering from prolonged neglect or abuse simply stop growing

failure to thrive syndrome' in which children suffering from prolonged neglect or abuse simply stop growing. In these children, psychological stress produced by their social environment causes the pituitary gland to stop secreting growth hormone. When the environmental stress is alleviated, and the child receives care, affection and stimulation, growth often resumes at a rate that enables catch-up growth to occur.

For both mental and physical development, and indeed all aspects of growth, genetic and environmental factors collaborate to produce normal development.

> *Physical developments, no less than psychological ones, are affected by the environment. A healthy environment is necessary for normal growth of the body, brain and nervous system.*

Brain development

The brain and spinal cord, like the eyes and ears, achieve two thirds of adult size in the first two years of life. Grow then slows. By age seven the child's brain and spinal cord are nearly adult in size.

the left hemisphere controls verbal reasoning and mathematical skills, while the right hemisphere specialises in non-verbal skills such as spatial ability, perception of patterns and melodies, and the expression and recognition of emotion

In appearance, the human brain consists of two symmetrical hemispheres that specialise in different functions. The left hemisphere controls verbal reasoning and mathematical skills, while the right hemisphere specialises in non-verbal skills such as spatial ability, perception of patterns and melodies, and the expression and recognition of emotion.

'Brain growth' actually refers to structural change in the organisation and size of nerve cells rather than an increase in the number of cells. In addition, more cells develop for 'feed and support' functions and the myelination of the nerve cells increase.

Myelination of the cortex, the process by which myelin develops around the nerve cells, is almost competed during this period. Myelin is the coating around nerve fibres that serves to channel impulses along the fibres and reduce the random spread of impulses between adjacent fibres. This helps the nervous system function quickly and accurately. As a result, the complexity of brain activity advances, with an accompanying shift in brain wave patterns that resembles an adult's.

● Moving

Significant advances in motor control occur during the pre-school period. These advances depend both on physical maturation of brain and body systems and on the increasing skill that comes through practice. They involve both the large muscles (gross motor control) such as those used in running, jumping and climbing, and the small muscles (fine motor control) such as those used in drawing and tying a knot.

Several factors contribute to growth in motor development. First, this development reflects a gradual transition from the reflex behaviour of the new-

born to the voluntary actions of the pre-schooler. A second factor is the child's increasing ability to accurately perceive body size, shape and position. Increasing bilateral co-ordination, that is co-ordination of the two halves of the body, also contributes to improved motor performance. Virtually every motor skill requires some sort of co-operation between the two sides of the body, moving in some kind of alternating time relationship. Walking, running and jumping are prime examples.

Main motor skills

In most cases the development of a motor skill involves the gradual integration of existing movements into a smooth and continuous pattern. In other cases new movements must be acquired. For example, learning to throw a ball skillfully involves both the integration of existing movements and the acquisition of new ones.

The child gradually learns to perform all these motor skills well. While the young toddler's steps are awkward, walking is a skilled activity by the end of the toddler stage. The stride lengthens, speed increases, balance stabilises. Finally the child can walk for long periods without resting.

By the age of four, the child's walk is essentially the same as the adult's and he seems to take pleasure in stunts like whirling and leaping. The five year old becomes more poised and controlled, and may even seem less active as he is no longer in constant restless motion. In fact, he is more active, since he achieves more with greater economy of effort and movement. Six year olds enjoy climbing and dancing – they seem to be all arms and legs.

Practically everything that active children do gives them exercise and practice in the use of their bodies. In the process they explore the new potential of their developing physiques. Children invent their own exercises when they climb, run and engage in games and exercise. They stretch more gently and in a more varied way than in most formal classes. Since their lives come to include longer sedentary periods of concentration, especially at school, it is important to realise that they need periods of energetic play to let off steam.

> *Differences in motor development are striking and some children are simply better co-ordinated, stronger and more athletic than others. These individual differences tend to persist throughout the life-span*

What accounts for them? Genes unquestionably play a role. The evidence suggests that identical twins are more similar than fraternal twins in performing motor skills during the pre-school years. Nutrition is also critical. Children who have been undernourished for long periods of time are likely to have delayed motor development. Their capacity to catch up with better nourished children of the same age depends on the duration, severity and timing of the nutritional deprivation. Opportunity to practice is also a factor. The development of both large muscle and fine muscle skills depends in part on the child's level of activity.

Fine motor skills

fine motor control is the ability to co-ordinate or regulate the use of eyes and hands together to produce precise, efficient and adaptive movements

In contrast to large muscle skills, small or fine muscle skills refer to the use of hands and fingers in the manipulation of objects. Fine motor control is also known as hand-eye co-ordination. It is the ability to co-ordinate or regulate the use of eyes and hands together to produce precise, efficient and adaptive movements. This co-ordination enables the development of a wide variety of skills including writing, drawing, and the manipulation of small objects and/or instruments.

Pre-school children learn to manipulate objects through visual feedback of what they are doing. The pre-school period is an important time for the development of manipulation skills. These in turn prepare children to deal successfully with the challenges of primary school.

Different cultures praise different skills. The child's developing dexterity and hand-eye co-ordination will be strongly influenced by the particular skills valued by the society into which he is born. Eating implements provide an everyday example of the effect of cultural influences. In countries where knives and forks are commonly used, children rarely learn to use both skillfully before the age of five. These children would have great difficulty using chopsticks! Yet Chinese toddlers learn much earlier. Two and a half is the average age at which Chinese children can use chopsticks efficiently. Do these children have greater innate dexterity? There is no evidence of that. It is simply that they are given a great deal of practice and encouragement in using chopsticks from an early age.

In literate societies drawing and writing occupy an important position. They call for precise muscular control along with increasingly complicated forms of purpose and understanding. Quite young children often like to try copying tasks, which help improve hand-eye co-ordination. **A child's ability to copy, like his ability to draw, improves with age, it is no use trying to rush the process.** A three year old's ability to copy will improve with practice, but no amount of practice will make him copy as accurately as a five year old. His system cannot be pushed into premature development.

Between the ages of five and seven, most children reach a stage where they can make a good attempt at producing a recognisable copy of a perceived image. Teachers naturally take advantage of this development when teaching children to write.

many three year olds clearly perceive the differences between a square, a triangle and a rectangle but they lack the skill to draw them

As babies and toddlers, children can perceive how specific things and people look, but they do not yet have the muscular control to express these perceptions in their drawing. By three they begin to bring their perceptions together with their ability to make representations. But there is still a long way to go. For example, many three year olds clearly perceive the differences between a square, a triangle and a rectangle. But they lack the skill to draw them on paper. By three, children's drawings begin to include recognisable representations of people and things.

Drawings of people follow a more or less predictable pattern. First they will draw just the head, and soon they will add a few squiggles inside the head to

represent a face, with legs coming straight from the head. Arms come next, usually sticking out of the head as well. It is not until children are about four that they draw a body to go with the arms and legs. Details like hair and ears come later. Why do children leave out the body? No one quite knows.

Drawings of houses and outdoor scenes follow a pattern as well. Early pictures, before age five, seem to contain unrelated marks which float all over the page. On second glance an observer may notice an attempt to balance the picture. By the time the child is five and a half, these marks begin to show up as houses, people and other parts of a whole picture. Circles, triangles and squares make up a large part. Various triangular shapes may represent people, windows, animals, clouds and other features.

Between five and seven, children's drawings begin to show that they have a notion of the inside part of an object and an understanding that objects have a front, back and sides.

Despite observable similarities, children's styles of drawing show a great deal of individual variation. Some like to splash colour all over the page, while others prefer small, neat shapes in the lower part of the paper. Like pre-school behaviour, art is delightfully full of life, energy and creativity at this stage.

> *'A summit of artistry is achieved at the end of the pre-school period ... Drawings by youngsters of this age are characteristically colourful, balanced, rhythmic and expressive, conveying something of the range and the vitality associated with artistic mastery ... And the often striking products reinforce a general notion of the child as a young artist – an individual participating in a meaningful way in processes of creation, elaboration and self-expression.'*
>
> Gardner (1980)

● Speaking

The acquisition of language is a dramatic accomplishment. **Language is the ability to use a particular set of sounds to represent an object, event or feeling.** Language expresses thoughts and feelings and is a major tool for organising and interpreting information obtained from the senses.

Almost all children learn the rules of their language at an early age without formal instruction. The infant is born to speak. Many observers believe that children have an innate gift for working out the rules of the language used. The basics of language are built into a child's growing brain.

In late infancy children learn to say a few individual words. They can also understand some of the language used around them by paying attention to context. At approximately two years of age, their ability to use language suddenly increases. The size of the vocabulary increases and they begin to string words together in short sentences. The ability to represent objects, people and events through language develops at about the same time as

representation in children's imitation, play and other actions. **While representation is not required to utter individual words, it is required to organise words into simple statements.**

Language acquisition

Despite intensive research, the process of language acquisition is not fully understood. No one theory has sufficiently explained the process. What is evident is that the growth of children's vocabulary and their improved ability to use complex sentence structures require both participation in responsive human interactions and exposure to a rich language environment. Growth in vocabulary and sentence ability goes with an improvement in the ability to engage in conversation tailored to the listener's needs.

children in the early pre-operational period are 'prisoners' of their own viewpoint, believing that what interests them interests everyone

It is usually beyond the ability of a young pre-school child to know that what is being said should interest the listener as well as the speaker. This is because children in the early pre-operational period are 'prisoners' of their own viewpoint, believing that what interests them interests everyone. This egocentrism leads children to endless self-reporting and the assumption that other people know what they know themselves. They frequently conduct a conversation as though it were a monologue, changing the subject without seeming to be aware of the listener's response. Of course, some adults do this too!

Most research on language development has focused on how children acquire the rules that govern our use of language. Two types of rules have been investigated most intensively: pragmatic rules for communicating in social contexts and grammatical rules for combining words. Many of the language rules that children learn amount to social conventions. They are so automatic that adults are not even aware of them. In adult speech, for instance, expressive devices such as sarcasm tell the listener not to take what is being said literally. Questions are often used as an indirect request – for example, *'Would you like to open the door?'*. Because of egocentric thought and social inexperience, young children do not fully understand indirect requests. For children, the simple pragmatic functions of language are often more important than the specific meanings of sentences.

For example, when English speaking pre-school children meet in small groups pre-school children who speak another language, they may play together for days without seeming to notice their language differences. An English speaking four year old walked up to a French speaking three year old and spoke in English. The three year old answered in French and they proceeded to play, acting as if they understood each other. They took turns, nodded agreement and so forth. Their interaction reflects the similarity of pragmatic rules between languages. The meaning of words is generally obvious from the context and from other non-verbal cues such as tone of voice.

At about four years of age, children begin to master some of the more complex pragmatic rules that seemed so difficult when they were younger. For example, take the rules for polite forms of request. To understand what is 'polite', a child must have the cognitive ability to consider the other person's viewpoint. Achievement of this ability is a well-documented developmental change.

Children must also learn grammar and the rules for forming words, phrases, and sentences. They must be able to express such states and relations as possession, negation and past action. Examples of these would be: *'This is my ball.' 'I can't see the ball' 'I saw the ball'.*

One of the most basic concepts is the organisation of words into sentences. Each group of words in a sentence has a certain pitch and stress so that listeners can distinguish one sentence from the next. Most children recognise and can infer meaning from intonation patterns sometime in the first year of life. This is an enormous accomplishment reflecting the special adaptation of the human species for acquiring language.

The Development of Language and the Brain

Pre-school children are obsessed with language. They listen to it carefully and chatter away for hours on end. By the age of six or seven they have acquired and mastered most of the rules for speaking their native language. This amazing feat suggests that there is a critical time or sensitive period for acquiring language that begins at one or two years of age, peaks in the later pre-school years, and continues to some degree until 13 to 15 years of age.

This special human sensitivity for learning language in the pre-school years seems to correspond with certain systematic changes in the brain and the rest of the nervous system relating closely to speech.

The best documented of these changes are myelogenetic cycles. Each cycle is a period in which **myelin** forms in a particular system within the brain. Three myelogenetic cycles in the system are important to language. The first cycle starts in the primitive brain (the brain stem and the limbic system) before birth and ends early in infancy. It seems to be associated with the development of babbling.

The second cycle begins around birth and continues until three and a half to four and a half years of age. It takes place in a more advanced part of the brain. This cycle appears to accompany the development of speech in infancy and the early pre-school years. During this second cycle, the auditory system develops quite rapidly. In addition, more effective connections are established between the temporal, occipital and parietal areas of the brain, which are crucially important for the processing of temporal, visual and spatial information. Increased connections among these different centres allows for more efficient synthesis of information about different aspects of a problem.

At the same time, all of these areas are more firmly linked with the speech area of the brain. This fosters the growth of symbolic and communication abilities.

The third cycle takes place in the association areas of the cortex. This plays a central role in intelligence. Although myelination of these areas begins at birth, it is not fully completed until the age of 15 or later.

Language learning principles

How do children learn these complicated rules which are unique for each language? Some psycho-linguistic researchers believe that we inherit **species-specific strategies**, or **operating principles**, for perceiving speech. These language operating principles are similar to the new-born's rule for visual scanning. That is, young children listen to the language in ways that help to discover its meaning. This makes it easier to understand the rules of speech production.

Three important operating principles help to explain two of the best known characteristics of children's early speech – telegraphic speech and over-regulation:

- pay attention to the end of words
- pay attention to the order of words and word segments
- ignore exceptions to language rules.

Telegraphic speech refers to a child's tendency to use only two or three important words to express meaning. For example, a child says; 'Mummy, rice' rather than *'Mummy, I would like to have some rice'*. The average length of sentences steadily increases during the period from two to six years.

In virtually all languages, children's telegraphic speech is characterised by deletions of certain kinds of words such as articles *(the, a, an)*, prepositions *(in, on, under, through)*, conjunctions *(and, but, because, when)* and parts of nouns and verbs that indicate relatively subtle changes in meaning. Since telegraphic sentences are often ambiguous, interpretation often depends on the context.

Over-regulation occurs when children apply a language rule to a word or phrase that does not follow the rule. Statements such as *"I goed out and throwed my ball at those gooses"* are common with English speaking children at this stage. They are unaware of irregularities in grammar.

the age at which children master the rule for a particular form depends partly on the complexity of the language

Children speaking the same language seem to acquire rules in a similar order. First they acquire rules that are simple and used often. Then they acquire an ability to use and combine more complex rules. Some languages are more complex than others, so that the age at which children master the rule for a particular form depends partly on the complexity of the language. Sound is another difficulty. Some grammatical forms that are not particularly difficult to understand may enter a child's speech late simply because they are difficult to hear. Because young children cannot read and can only listen to language, they often make mistakes due to the way a word or phrase sounds.

For the great majority of children, language develops very efficiently. A highly responsive style of interaction is helpful. The adult can often let the child decide what to talk about, expand on that topic, work hard to understand what the child means and suggest new activities. The caregiver should also pay more attention to what the child wants to say than whether it is being said correctly.

In some cultures, language teachers get the best results by assuming the role of a co-operative conversational partner instead of taking an explicitly didactic or

directive role. This is based on studies on that have mostly been carried out in mainly middle-class, English speaking families. This is a cultural group within which responsive, non-directive, child centred parenting is considered desirable. In this group, children and adults have relatively equal social status, and children are expected to function as conversational partners from a very early age.

In other cultures, the rules governing parent-child interaction and parental roles are quite different. In Samoa, for example, social status is closely connected to age, and the idea of engaging a child in conversation as a social equal would seem unnatural. Among the Kaluli of Papua, New Guinea, it is considered better to ask children to talk as adults about adult matters than to

What Parents Can Do: Creating Language Enriching Environments

Parents and caregivers can do many things to help sustain and enrich the natural process of language development. Children learn about how conversation works by taking turns and listening attentively. Children should be encouraged to speak with other children. Learning from other children is a very important aspect of language development, especially when groups of children of different ages are gathered together.
Every child needs to be encouraged to listen, to note the difference between sounds, to imitate sounds, to name objects and to arrange words together in meaningful sentences. As conversationalists, questioners, listeners and respondents, parents are the most important sustainers of a child's early language development.

• Parents should try to speak more clearly and pause longer between words than in adult speech. Rapidly changing patterns are confusing for children. While simple language is best for babies, it is not necessary to use 'baby-talk' for pre-school children.

• Games of repetition provide excellent practice. Keep it easy enough to be fun. Pre-school and even older children benefit from remembering games and repeating words in order. Repetitive patterns such as nursery rhymes are one of the best ways to organise young brains around language.

• Children need time to think of the right words and pronounce them. Caregivers should not deprive them of a chance to learn by saying the words for them. If the child mispronounces a word, gently repeat it correctly. Children learn rules from helpful adults. Parents tend to correct meaning more often than grammar, but they can tactfully reshape and expand the child's talk.

• Linking all language learning to everyday happenings helps understanding and memory. Caregivers should use concrete objects to demonstrate meaning whenever possible. Children need to hear many questions in order to pick up the interrogative form. Practice asking why, what, when, where, who and how questions, and show the child how to answer them. The caregiver should follow his or her natural tendency to increase the complexity of sentences as the child gets older. To check understanding, ask her to restate what she thinks was said.

'descend to their level' in talking to them. In these cultures, therefore, we would not expect the responsive style of talk that facilitates language acquisition in British and American children.

Language teaching is most useful to young children when it is presented in the context of their own activities and attempts at expression. **Older pre-school children, however, can use language to learn language.** They no longer need to encounter each new language skill within a meaningful context. Furthermore, they become increasingly capable of learning intentionally, of attending to and benefiting from explicit instruction, and of using models as sources of learning.

At this later stage, simply responding to the child's interests may not be sufficient to stimulate optimal language development. Talking about a wide variety of topics, using an enriched vocabulary, engaging in talk about talk itself, discussing word meanings, challenging children to explain themselves and to justify their own thinking, setting higher standards for comprehensibility and explicitly correcting errors are all important for children of four, five and six. Children in this age range are also expected to control certain language related literacy skills. These mainly emerge from being read to aloud, from experience in looking at books with adults, and from experience with letters, pencils and paper. Observing adults reading and writing is also important.

Stuttering

Many parents are anxious over a child's stuttering, even though such concern is usually unnecessary. After all, it is quite common for children of two or three to repeat sounds occasionally or to hesitate between words. Most of them never realise they are talking incorrectly, and they grow out of it without any special help. Actual stuttering occurs only when this pattern persists over long periods of time (over two to three months) and interferes with communication.

About one in twenty pre-school children stutter at some point, with a greater incidence in boys than in girls. The cause is unknown. Some children may have trouble learning the normal rhythm of speech, but most have no medical or developmental problems. Stuttering may increase when a child is anxious, tired or ill, or when he gets excited and tries to talk too rapidly. Some children stutter when learning too many new words at once. At other times the child's thoughts run ahead of his speech and he loses track of what he is saying in the middle of the sentence. Repeating a sound or a word allows him to catch up.

The more frustrated a child becomes about his stuttering, the more trouble he will encounter. The best approach is for the parent simply to ignore the stuttering. Listen when he speaks, but do not correct him. At the same time, parents can set a good example by talking calmly and correctly and by using simple language when addressing the child.

If he continues to stutter, it may help if parents speak more slowly. They should set aside some relaxed time each day to play and talk with him quietly. They can build his self-esteem by praising him for all the activities he is doing correctly, while not drawing attention to his speech difficulties. With this kind

of support, children who develop true stuttering can usually overcome their problem before entering school.

When a child's stuttering is severe, extra help may be necessary to avoid a long term problem. Parents should speak to a health care worker if the child frequently repeats sounds or parts of words, is very self-conscious, or shows obvious signs of tension such as facial twitches or grimaces.

Language Milestones at Six Years

Recalls part of a story
Speaks sentences of more than five words
Uses the future tense
Tells longer stories
Says name and address

Thinking and learning

How pre-schoolers think

Making sense out of experience is the key to early learning. The body, the hands and the senses serve as the tools for acquiring new learning. Even at play, children are working hard at their mental development. Therefore, an enriched environment can encourage the kind of play that promotes development and lays a good foundation for a lifetime of learning. But what does 'enriched' mean for children of different ages?

The child's thinking ability undergoes several major changes along the route to adult-level reasoning. At each stage, certain types of experience are necessary and children who get the right sort of stimulation ('brain food') have a better chance of moving on to the next stage of reasoning.

it is through first-hand experience that children develop knowledge, reasoning skills and the ability to manipulate information

The child sees many inconsistencies between information he is given and the reality of his daily experience. By puzzling out these inconsistencies, he creates his own understanding at each learning stage. Thus it is through first-hand experience that children develop knowledge, reasoning skills and the ability to manipulate information. For this type of early learning, parents or caregivers are the first and best teachers. Practice is the essential ingredient. The brain's systems will continue to be perfected and connected all through childhood and most of adolescence.

The pre-school child's capacity for abstract thought is still very limited. The pre-schooler is caught up in present reality with only a vague concept of past, present and future, and he has trouble with other people's points of view. Pre-school children also find it difficult to get beyond the immediate physical characteristics of objects.

Because of this limited capacity, these children have trouble telling reality from fantasy and may appear to have little regard for truth. It is not that they are 'lying'; it is simply they cannot yet sort out the differences between events that actually happened and those that were imagined.

Motivation is important. Pre-school children enjoy tangible daily evidence of goals set and achieved. **Parents and caregivers who understand and respect the unique quality and limits of early thinking have the best chance of helping it develop.**

At this stage of development, children's intelligence is characterised by the ability to organise and associate new information with previously acquired information. Children who can 'see' relationships and organise input at the sensory level seem to have an easier time organising their thoughts and ideas. Rather than giving specific bits of information to the child, encourage him to build up mental pictures. This could be by reminding him of a previous experience *('do you remember when we ...')*.

It is difficult for the pre-school child to combine information from two different areas of the brain. For example, he will look at the shape of a letter and try to pronounce a sound to go with it or he will hear a number and try to write it down. Even babies can be conditioned to associate two things that are repeatedly presented together. However, this type of forced learning lacks real meaning for the child and may use inappropriate parts of the brain instead of those better suited for the task.

Pre-school children think about the world in quite primitive ways. For example, they may think that dreams come from street lamps or that we think with our ears. They may think that clouds are alive and that the sun follows us when we move. **Piaget suggested that three, four and five-year-old children make such errors because they are still unable to engage in true mental operations.** He termed this type of thinking 'pre-operational'.

According to Piaget, limited attention is the key feature of a pre-school child's thinking. The child can only focus on one thing at a time. **This changes at six or seven years of age, when the transition to concrete operational thinking emerges.** At this point, children are able to combine, separate and transform information in a logical manner. Now they know that the sun does not follow them and that dreams do not come from street lamps.

As pre-operational intelligence differs in many ways from the thinking of older children and adults, it is sometimes puzzling and confusing to parents and caregivers. Piaget pointed out that pre-operational thinking not only lacks logic but is egocentric. Take a four-year-old's exclamation: *'Look Mummy, the moon follows me wherever I go'*. This is typical of children's self-centred thinking at this stage.

Complex thinking is another characteristic of pre-operational intelligence. In this kind of thinking, a chain of ideas is formed. Each idea is linked to the preceding or following one but the whole chain is not organised into a unified concept. A

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third type of pre-operational thought is the capacity for **deferred imitation** which allows children to engage in pretend games.

Representation

representation is the ability to think about the property of things without having to act on them directly

The ability to pretend is linked to the capacity for representation. This is the ability to think about the property of things without having to act on them directly. **During the pre-operational period, the development of representation is the cornerstone of all cognitive development.**

Recent research suggests that pre-operational intelligence develops in two stages or levels. The first level is between the ages of two and four, when single representations are within children's ability. At the second level, between four and six years, children are capable of combining two or more representations. **The transition from one level to the next corresponds to a spurt in mental development.**

When children are observed in pretend play, the results indicate that two year old children can control only one representation at a time. For example, in making a doll act as a person, the child can represent 'the person' doing one thing: a child walking, a man eating, a woman washing her hands.

As the child matures, single representations begin to include a set of related characteristics or actions. These may take the form of concrete social categories. For example, the child may make a doctor doll perform a series of 'doctor activities' such as putting on a white coat, washing its hands, taking a temperature and giving an injection.

At about four years of age, children begin to understand some of the inter-relationships and complexities of social behaviour. For example, the category 'man' includes as part of its meaning the relationship between men and women. Similarly, they begin to understand other social relationships such as husband-wife, mother-father, mother-child and so forth. By using representation, the child begins to understand relationships in which variation in one aspect of development depends upon variation in another.

This ability is reflected in the child's new attempts to influence behaviour. A four-and-a-half-year-old may use a strategy such as: 'If you let me play with your box, I'll let you play with my bucket'. The pre-school child seeks to make sense of the people around him and the ways in which they relate to each other.

Imitation

Imitation is one of the most important ways children learn about the social world. Before the capacity for representation develops, infants can imitate an action only at the moment it is observed. This period, from birth to about the age of two, is called the **sensorimotor period**.

One result of representation skills is the capacity for **deferred imitation**. This is the process by which a child observes an action, and then at a later time calls it up from memory and actively imitates the original action.

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What Parents Can Do: Helping Children Create Mental Pictures

During the pre-school years, the parents' or caregivers' role as 'security providers' should expand to challenge both boys and girls intellectually. Here are some points to remember:

• Before the age of six the child's task is to learn to make sense out of the world, not to memorise material that has little meaning without the necessary neural structures.

• The child should be helped to work out meanings and relationships in daily events. Continual 'why' questions are one way a child expresses the need to make connections.

• Introduce skills of sequencing – arranging objects according to size and remembering words or events in order.

• Mental patterns are built on networks of sensory connections. Parents should call the child's attention to patterns in the sensory world. For example, *'What does this taste like?'* or *'Do these two things look alike?'*.

• Parents should encourage children to find patterns in songs, rhymes, familiar stories or in sounds around the house.

• Motor skills need to be practiced over and over. This can be done by using everyday utensils, by catching and throwing a ball, or by playing copying games with fingers or body movements. Self-help skills and household chores are very important for the child to master. Parents/caregivers do best by encouraging her to do it herself.

• If a child needs help, she should be guided gently through the task several times so she can learn the way to do it. Alternatively, the task may be divided into a series of smaller activities.

• The child should be allowed to make reasonable choices whenever possible. Learning to make simple decisions and small mistakes is difficult but necessary. Children's conception of reality needs to include experience of cause and effect.

Imitation also requires the ability to take another person's point of view. Piaget pointed out that children often make the mistake of assuming that another person shares their own view of things. Everyone who has spent time with young children is aware of this egocentrism: the inability to take another's point of view. Even when pre-school children are shown another person's perspective, they cannot keep it in mind and integrate it with their own. They are not selfish but simply captives of their own viewpoint. As cognitive skills increase, children learn to take perspective. By four and five years, children can understand the difference between their own perspective and another person's – as long as only one or two simple concrete factors are involved. Thus, by four or five years of age, most children have taken a major step away from egocentrism.

by four and five years, children can understand the difference between their own perspective and another person s – as long as only one or two simple concrete factors are involved

Memory

In order to understand another's perspective, the child must be able to remember. **Memory is the ability to encode, store and retrieve information.**

There are two kinds of memory: short-term and long-term. The short-term or working memory processes information retrieved within a few seconds or minutes of its being encoded. Pre-school children can use both short-term and long-term memory. For example, when an experimenter presents a brief list of words or a small group of pictures, four and five year olds often do as well as older children in recalling the words or pictures immediately after presentation. In fact, the pre-school child's long-term memory is often quite amazing.

Changes in memory characterise early development. These are related to changes in cognitive development, including:

- increasing ability to focus attention
- ability to connect ideas with each other in a more logical way
- ability to devise strategies for remembering.

Although memory improves throughout childhood, important developmental changes take place during the pre-school years. Just as with taking perspective, a major advance in memory abilities seems to begin at about age four or five. At this point, children start to recall items of some complexity and begin to monitor and manipulate their own memories.

Learning through play

Pre-school children love to play. They spend hours building and knocking down towers, playing house and acting out stories with their playmates. While playing in infancy consists mainly of imitations of repeated actions, sometimes with variations, in the pre-school years, play expands into much of the child's life. Pre-schoolers love to play games that test and fine-tune the mastery of their bodies – running, climbing, swinging, throwing. They like to build structures with mud, sand or blocks and they love to pretend. They 'make believe' about all kinds of things: everyday concerns, new things they have learned and imagined adventure.

Through active interaction, exploration and observation of the environment, the child actively advances his own learning. Play facilitates the transition to higher levels of cognitive development. This is because the 'as if' nature of play allows children to perform actions that are more developmentally advanced than those they can actually achieve. Play fosters a sense of self-esteem and competence, supporting and reinforcing the child's capacity for effective action. As a consequence, in play a child often acts at a higher plane than in his normal daily behaviour. For example, he can be a king, a football star or any hero of his imagination.

The power of play is extraordinary and – at the same time – extremely serious. It is the most natural way for a child to use his capacities, to grow and to practice the rapidly emerging skills of early childhood. Why is play so powerful?

Play helps children to grow, learn and explore. It builds children's curiosity, confidence and self-esteem. At play children are free from failure and can control an imaginary world. Through play children practice language, develop social skills and come to understand adult roles. Play also helps children to master their newly emerging perceptual and motor skills. These are just a few of the many kinds of learning involved in play.

At each stage in the child's development there is a driving force that propels them to utilise their new physical, social, emotional, intellectual and language skills. But the goals and structure of play differ at different ages. For example, in the first two years of life, the infant learns through movement and plays by repeating different movements. Through experimenting with sight, sound and touch, he learns about the cause and effect of events. Then from two to six, children become great pretenders. By utilising simple objects as symbols, they imitate the people and events in their world.

There are many types of valuable play. In **solitary play**, children might read books, draw pictures or explore household objects on their own. In **parallel play**, two children play side by side. For example, one builds a sand castle while the other rolls back and forth.

In **co-operative play**, children play in groups. This is often pretend or dramatic play. Finally, **free or self-directed play** is when children choose what they want to do. This is often the most fun – and the best learning experience.

In all productive play, *the fun is in the doing*. Children need lots of time to pursue their own ideas, to do things their own way, to feel what it is like to pretend to be someone else. Parents and caregivers can encourage children to play in productive ways by setting the stage for them. Also when appropriate, they can build on children's ideas while they play.

Social development

Social development can be seen as a dual process: **children become increasingly integrated into the larger social community and they become differentiated as distinct individuals**. The process of acquiring the standards, values and knowledge of communities and society is known as **socialisation**. The way in which each child develops a characteristic sense of himself and a unique way of thinking and feeling is known as **personality formation.**

> *Socialisation begins when a child is born. It is especially important during early childhood when the first understanding of the child's community is constructed.*

It is a process that requires the active participation of both adults and children. For example, parents and caregivers set expectations for children's proper behaviour as well as the rewards or punishments for their conduct. They also select and create the social contexts within which children experience their environment and learn the rules of behaviour. Children are active participants in this process.

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What Parents Can Do: The Development of Emotions and the Need for Guidance

It takes a long time for children to develop understanding of their own anger, jealousy, fear and restlessness. Parents and caregivers can help infants, toddlers and pre-schoolers to understand and deal with their emotions. At six years of age, children can understand explanations about behaviour and follow examples. What can parents and caregivers do to encourage children to become responsible, self-controlled adults?

Provide simple rules. Be clear about what behaviour is acceptable and what behaviour is not. Rules must be based on what can be reasonably expected from children at their stage of development. Children are easily confused if rules change from day to day or from parent to parent. Rules should, therefore, be simply stated.
As children test limits, consistency is essential.

Set reasonable expectations. Parents need to understand normal patterns of development to know what to expect from children. Realistic expectations help children develop confidence in themselves and trust in adults. For example, many people think toddlers are selfish and should share with others, but selfishness is common in young children. Children become more generous as they grow older, especially if adults have been generous with them. Children will be encouraged to share by seeing generosity in others. They should be complimented whenever they share.

Respect children's feelings. Children need to learn how to respect themselves and others through example. Parents and caregivers can help children to express both positive and negative emotions in ways that are acceptable to the culture. If treated in a kind, generous and considerate way, children will be kind, generous and considerate. If ignored, punished or laughed at, they may become shy, defiant or demanding. When children's emotions are not understood, they may take their anger out on younger children. Some children appear unresponsive to scolding or punishment. It may be that they feel that they cannot count on adults to help and understand them. All young children need time with the adults who care for them, activities that interest them and responsibilities they can handle.

Prepare a safe environment. Parents should try to make their home a good and safe place for children to explore. All dangerous items should be placed out of reach.

Provide security. For children to be responsible they need a strong sense of security. A clear set of rules and reasonable limits provide the security for children
to test their newly developing skills.

Have confidence in the child. Children who are free to explore safely and securely will become competent. Children learn best when adults do not interfere.
Parents must trust children to succeed.

Offer choices. Children can make good choices if the choices match the child's abilities. Choices teach children how to gain more control over their lives.

Express pride, interest and love. Children are competent if we expect them to be. Affection helps children grow emotionally. Children learn to trust when they can count on us. If we have reasonable expectations, and if we let them know we love them, they will be confident that they can succeed. Parents can give the priceless gift of emotional good health to their children.

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In order to function in a social world, children need to understand the social categories, roles, rules and expectations of their families and communities. Effective socialisation ensures that if a child comes to consider herself a girl, she will acquire the appropriate behaviour for girls, as defined by a particular social group. But she must have certain skills and abilities to understand the requirements of the role.

Social development during the pre-school years is closely linked to achievements in cognitive and linguistic skills. All the feedback received from the social environment is crucial to development of a sense of self.

One of the most remarkable facts about social development is the extent to which children adopt the rules defined by their social group as necessary. By the time children reach their sixth birthday, a great deal has been learned about the roles they are expected to play and how they should behave in accordance with these roles. They have also learned how to control anger and aggressive feelings and how to respect the rights of others.

The combination of characteristics that shape personality is unique for each child. His or her particular mix of genetic endowment and personal experience is never completely shared with another human being. Some elements of personality may be obvious immediately after birth since some infants reveal a particular temperament. But personality is more than individual temperament. It includes the way people conceive of themselves and their personal style of interacting with others. Thus individual personality development and socialisation are two sides of a single developmental coin.

Friendship

the skills involved in choosing friends and deepening friendships are learned over a lifetime. Young children are just beginning to find their way

During the pre-school period children begin to spend significant amounts of time interacting with their peers – children of their own age. By the age of three, most children have begun to make friends. The skills involved in choosing friends and deepening friendships are learned over a lifetime. Young children are just beginning to find their way.

The ability to make friends offers rich rewards. It depends on an increasing awareness of others and is fundamental to the development of moral thinking. Friendships sustain and extend children's moral development and enable them to explore a growing awareness of other people's needs. Friendships also allow children space and time to try out new ideas.

Children learn from each other in ways they never can learn from adults. Their friends set standards against which they measure themselves. Friendship also offers emotional support, giving the child the feeling that he is wanted.

By the third year, most children play with other children rather than simply alongside them. The first friendships are usually with children like themselves, of much the same age and interests. These friendships may be based merely on shared objects rather than on shared views of the world. However, real friendships develop as the ability to understand and communicate grows. Children may begin to recognise that their friends' emotional states can differ

from their own. They may not always read these emotions accurately, but even at three, children show concern for each other.

By four years of age, there is a shift in thinking. Children will value others' actions and make their choices accordingly. Unless children share activities with each other, it is unlikely that they will choose to spend time together.

Between five and six, friendships tend to become more stable, as friends are now chosen for reasons of personality and common interests. Although individual friendships between boys and girls can remain firm, children of five and six tend increasingly to gravitate toward their own sex.

Through these early friendships, pre-school children learn to be accepted by their social group. Relationships with peers is an important part of the socialisation process. They must at times control their anger when their goals are thwarted; at other times, they must subordinate their own wishes for the good of the group. Learning self-control, controlling aggression and helping others are central processes in pre-school social development.

Self-control

In the process of acquiring a basic sense of identity, children also learn what kind of behaviour is considered good and what is considered bad. They are expected to learn and adopt the rules of proper behaviour, and to follow these rules without constant supervision.

In order to behave according to social standards, children must acquire the capacity to control their own behaviour

By the beginning of the third year, children are sensitive to society's standards of good and bad. They can begin to anticipate adults' reactions and plan their own actions accordingly. Internalisation of adult standards occurs when children want to conform to adult standards and can anticipate their reactions. In order to behave according to social standards, children must acquire the capacity to control their own behaviour. They need to be able to inhibit their action and carry through actions according to pre-established rules, even when they do not wish to.

As pre-schoolers lack self-control, they need supervision. In so far as behaviour is simply a direct response to the environment, they are controlled 'from the outside'. For example, their direct response to being hit is to get angry and hit back. Children who resist the impulse to hit back and seek an alternative response are displaying a degree of self-control.

As they grow, young children develop the ability to estimate the benefit to be gained from changing from direct, immediate reactions to indirect, mediated and thoughtful ones. This is made possible in part by an expanding time frame and increased understanding of the proper forms of behaviour. If children do not understand 'short-term' versus 'long-term', they cannot measure short-term gain versus long-term gain.

At this age lying is very common. Pre-schoolers may lie for a variety of reasons. Sometimes they may be afraid of punishment or they may have been carried away with their fantasies. They may also be imitating adult behaviour.

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Telling tall tales is entirely different from lying. This is usually an expression of the child's imagination at work and does no harm to anyone. It becomes a problem only when caregivers and children can no longer distinguish truth from fantasy.

Aggression

Shortly after birth, the new-born displays signs of two kinds of behaviour: aggressive and socially helpful (or pro-social behaviour). The first signs of aggression are evident in the angry responses of new-born babies when their rhythmic sucking is interrupted. Signs of socially constructive behaviour are seen just as early when newborns cry in reaction to the cries of other infants. This contagious crying is the earliest form of empathy, the sharing of another's feelings. This is the basis for helping and for other pro-social behaviour. What do we know about the development of these complex human emotions during the early childhood period?

Theories of Aggression

Of all aspects of human social relations, none are more confusing and provoke more anxiety than the causes of human aggression. Some of these causes, such as frustration and poverty, can be attributed to factors in the immediate environment. Other underlying causes can be related to an individual's experiences and learning. Others suggest that aggression emerges from our evolutionary past.

For example, aggression can be viewed as an important evolutionary mechanism by which the characteristics of a species' most successful individuals are passed on to the next generation. Since individuals compete with other individuals for scarce resources necessary for survival and reproduction, evolution would seem to favour competitive and selfish behaviour. According to this perspective, aggression is a natural and necessary mechanism which automatically accompanies the biological maturation of the young.

Social learning theorists suggest a second explanation: that aggressive behaviour is learned because of the rewards obtained by the aggressor. A third explanation suggests that children are taught to use as models and imitate the aggressive behaviour in their environments. Children who have been exposed to frequent outbursts of aggression in their environments are more likely to display aggressive forms of behaviour. Once children are old enough to understand that they can get their way by harming others, they learn from adults specific types of aggression as well as believing that aggressive behaviour is acceptable.

As with other forms of complex human behaviour, the choice between biological-evolutionary perspectives and environmental-learning theories of behaviour is not sufficient. Aggression should instead be viewed as a form of behaviour that develops from interaction between deep-seated biological predispositions and culturally organised environmental influences. Nor can aggression be understood without looking at the various mechanisms that societies have used to control and regulate the level of aggression of its members.

Aggression is difficult to define. It occurs when one person commits an action that hurts another. Thus aggression generally refers to behaviour specifically intended to harm someone. It appears as soon as children understand that they can cause another's distress.

Two forms of aggressive behaviour appear during the early childhood period. **Instrumental aggression** which is directed at obtaining something desirable: and **hostile aggression which** is specifically aimed at hurting another person.

Between the first and the third years of life, aggressive behaviour is shown in brief conflicts over ownership rights, for example over toys. Between three and six years the expression of aggression undergoes several changes. It shifts from conflicts arising from a desire for an object – aggression not directed at another individual – to aggressive outbursts directed at a particular person who is seen as having wronged them.

How can aggression in young children be controlled? Researchers have focused on two mechanisms used to control human aggression: the evolution of hierarchical systems of control and the use of reward and punishment.

Aggression limiting mechanisms are widespread among animal species and include social structures that place members of the species in a hierarchy of dominance and subordination. Interaction among members of the same species is regulated by these hierarchies. Dominant animals need only to threaten subordinate members of the species without attacking to achieve their goals. Since they do not attack, the frequency of attack is diminished.

In a similar fashion, child development researchers have observed a close connection between aggression and the formation of dominance hierarchies among three and four year old children in pre-school settings. Dominance hierarchies influence who fights with whom and under what circumstances.

while the young of other species must rely entirely on dominance hierarchies, parents and older siblings of human offspring set limits to the initial expressions of aggression

Although similarities exist across species, it is important to recognise the unique attributes of human aggression. While the young of other species must rely entirely on dominance hierarchies, parents and older siblings of human offspring set limits to the initial expressions of aggression. In this way, rules about proper behaviour are internalised and pave the way for increasing levels of self-reflection and self-control.

Many people believe that aggression can be eliminated altogether by punishment. While some studies confirm this belief, **others have actually found that parents who control children's behaviour through physical punishment often raise more aggressive children.** Moreover, severe punishment involving physical harm leads a child to conceptualise the world in deviant ways that later perpetuate the cycle of violence. For example, children who have been harmed are likely to develop:

- deficient patterns of processing social information
- a tendency to attribute hostile intentions to others
- an inability to solve interpersonal problems.

Caregivers often use another strategy: **rewarding good and non-aggressive behaviour.** Since young children use aggression to gain attention, one tactic is to ignore the aggression and show interest only when children are engaged in co-operative behaviour. A similar tactic is to pay attention to the victim while ignoring the aggressor.

Such selective attention techniques can be effective because the aggressor is not rewarded either by adult attention or by the submissive behaviour of the victim. In this way children can be taught to be sympathetic to the victim of aggression and to assert themselves non-violently in the face of aggression.

Even at an early age, reason can be used to reduce aggression. For example, the following concepts can be explained to children in order to reduce aggressive behaviour:

(1) aggression hurts another person and makes that person unhappy

(2) aggression does not solve problems, it only brings about resentment

(3) conflicts can be resolved by sharing, taking turns, playing together.

This strategy helps children control their aggression by making them aware of the feelings of those they react against. It appears that the most successful techniques for teaching self-control go beyond mere suppression of aggressive impulses.

Pro-social behaviour: learning how others feel

Pro-social behaviour includes altruism, co-operation, helping and empathy. These are common forms of human interaction. There is little doubt that human beings have a biological potential for pro-social behaviour. Like aggression, pro-social behaviour is influenced by immediate social circumstances and cultural tradition. How does the biological predisposition for pro-social behaviour manifest itself, and how is it modified by the social environment?

children become better able to recognise, interpret and respond appropriately to others' distress

Human pro-social behaviour is stimulated by **empathy**, the capacity to share another's emotional response. While very young children are able to empathise, this capacity matures with increasing cognitive capacity. With this new capacity, children become better able to recognise, interpret and respond appropriately to others' distress. Child development researchers have identified at least four distinct stages in the development of empathy, each stage corresponding to a growing capacity to understand themselves in relationship to others.

The first stage occurs during the first year of life. Even before an infant is aware of the existence of others, he will cry at the sound of another infant's cries. This early empathic behaviour is like an innate reflex.

The second stage appears in the second year of life when infants are capable of understanding other people's feelings. They realise that someone else's distress or laughter is distinct from their own emotions. With this realisation, children can turn their attention from concern with their own comfort to comforting others.

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The third stage in the development of empathy occurs between three and six years and corresponds to children's increasing command of language and symbols. Language allows children to use a wider range of subtle feelings and to relate to people who are not present. During this period, children may respond to another's distress in quite complex ways. For example, they may even suggest ways of coping with a problem such as, *'Lie down, Mummy.'*

Children at this stage may be concerned with issues such as the general conditions of others, their poverty, oppression, illness or vulnerability. Children of this age are aware of classes of individuals and can empathise with groups of people

The fourth stage in the development of empathy occurs sometime between the ages of six and nine when children can understand their own feelings within the context of a larger set of experiences. Children at this stage may be concerned with issues such as the general conditions of others, their poverty, oppression, illness or vulnerability. Children of this age are aware of classes of individuals and can empathise with groups of people.

Recent research has underscored the effectiveness of two methods of encouraging pro-social behaviour used by parents and caregivers in many societies. These are explicit modelling in which adults behave in ways they desire the child to imitate, and induction. This is the process of giving an explanation that appeals to children's pride, their desire to be grown-ups and their concern for others.

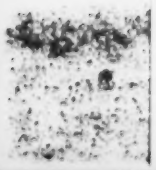
The strategies used to increase pro-social behaviour do not generally occur in isolation from efforts to decrease aggression. In fact, many different techniques are likely to occur in combination, creating cross-cultural diversity in overall patterns of socialisation.

Although children will be set different goals and values in each of the world's many cultures, parents and teachers can learn a great deal by observing the young child's behaviour. The questions listed in the next two boxes above can serve as indicators since they represent how well the young child is learning and adjusting to the norms and values of his family and culture.

It is important for parents and teachers of young children to know that difficulties in any of these categories is not necessarily cause for alarm. By listening and observing the behaviour of young children, parents and teachers can find a better way to understand them.

The period of early childhood ends at the age of six or seven years. Children then pass through to the next developmental stage and assume new social roles and demands. Although development between three and six has been less dramatic than in the daily changes of the first three years, children have accomplished a great deal during these years.

By this age, children's mental structures have developed a level of complexity similar to adults. They are ready for formal schooling and interaction with friends and peers beyond the family. School friends and teachers become ever more important and new areas of thinking become possible. As children



What Parents Can Do: The Child's Social and Emotional Development

Parents often ask if their child's development is proceeding normally.
They should be encouraged to look carefully at her behaviour.
Here are some questions that might aid observation:

Emotional displays. Children's ability to show different kinds of emotions is a sign of healthy development. Does the child exhibit a range of emotions such as joy, anger, sorrow and excitement? A child whose emotions are of low intensity or whose level of emotion is 'flat' or unchanging may be having difficulties. The capacity for sadness often indicates positive emotions of attachment and care.

Variations in play. Does the child's play change over a period of weeks? Does she add elements or activities even when playing with the same play materials? Increasing complexity of play indicates an inner security which is necessary for exploring the environment in new and challenging ways.

Curiosity. Is the child curious and excited about meeting new people and things? Children should be interested in and challenged by new territory. Curiosity is a healthy sign of growing confidence and the need for new challenges.

Friendship. Can the child initiate, maintain and enjoy a relationship with one or more children? Playing alone for some of the time is fine. However, a child's continual withdrawal from friends may create difficulties in the development of necessary social skills.

Acceptance of authority. Does the child usually accept adult authority? Excessive refusal to follow an adult's instructions is not appropriate, but young children often show occasional resistance, assertion of personal desires or expressions of objections. This indicates healthy socialisation. A young child who always accepts adults' demands and restrictions without a word may suggest excessive anxiety, fear or lack of self-confidence.

Interest. Is the child capable of sustained involvement and interest in something outside of herself? Is her attention span increasing? Children should show increasing involvement in activities and the ability to identify and complete a task or a project.

Spontaneous affection. Does the child express spontaneous affection for one or more people who spend time with her? Children whose development is going well are likely to let others know that they are loved and to express the feeling that the world is a good and comforting place.

Enjoyment. Is the child able to enjoy the good things in her life such as playing with others, participating in family activities and exploring new places? A child may have specific fears or concerns – but if they do not prevent the child from participating in and enjoying life, then it is reasonable to assume that these fears will be outgrown.

Developmental Health Watch

Because each child develops in an individual manner, it is impossible to predict exactly when or how any particular child will acquire a given skill. The developments listed below give a general idea of the changes to be expected as a child gets older, but parents and caregivers should not be alarmed if development takes a slightly different course. If a six year old child displays any of the following signs of possible developmental delay, a health care worker should be consulted.

- Exhibits extremely fearful or timid behaviour
- Exhibits extremely aggressive behaviour
- Is unable to separate from parents without major protest
- Is easily distracted and unable to concentrate on any single activity for more than five minutes
- Shows little interest in playing with other children
- Refuses to respond to people in general or responds only superficially
- Rarely uses fantasy or imitation in play
- Seems unhappy or sad much of the time
- Does not engage in a variety of activities
- Avoids or seems aloof with other children and adults
- Does not express a wide range of emotions
- Has trouble eating, sleeping or using the toilet
- Seems unusually passive
- Cannot understand two-part commands
- Cannot correctly give her first and last name
- Does not use plurals or past verb tense properly when speaking
- Does not talk about her daily activities and experiences
- Cannot build a tower of six to eight blocks
- Seems uncomfortable holding a pencil

continue to mature, achievements in and out of school become ever more sophisticated. Children become more individual as their particular strengths, talents and vulnerabilities are revealed. The drama of development that took place in early childhood has prepared the ground for the new demands and opportunities to come.

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Resources: an annotated list

Association for Childhood Education International. **The Portage Guide to Early Education.** *Portage, Wisconsin: Portage Project Materials, CESA 5, 1991.*

The revised edition of the *Portage Guide to Early Education* has been used successfully in thousands of pre-school programmes throughout the world. It offers a developmental approach to the early education of young children from birth to six years of age. This is a comprehensive yet easy to use system which includes the tools needed to teach young learners effectively. Regardless of the instructional delivery system, teacher/child ratio, or professional status of teachers, this criterion-referenced assessment and accompanying activities and techniques can be used to focus individualised instruction where needed and to help ensure that each child reaches her/his full potential.

It is a valuable resource for anyone designing an educational programme for young children. Each complete set of this Guide contains: 1) Checklist of Behaviour; 2) Manual of instructions; and 3) Card File of suggested teaching activities.

Bee, Helen. **The Developing Child.** *New York: Harper Collins College Publishers, 1992.*

Two of the most powerful resources in child development education have now joined forces to create an unprecedented multi-dimensional educational tool. **Childhood**, the highly acclaimed television portrait of the journey from infancy to adolescence, and **The Developing Child**, Sixth Edition, have come together to form a unified, mutually supportive learning package. The video series and the text work together to create a learning environment that reaches beyond the printed page, offering a unique opportunity to breathe life into the study and teaching of child development.

The book's 15 chapters are organised into six Parts: Introduction, The Beginnings of Life, The Physical Child, The Thinking Child, The Social Child, and The Whole Child. In presenting the information, the author finds that difficult but essential balance between theory, research, and practical application. Presented in this way, the study of child development is relevant not just for psychologists but also for students in many other fields in which this information is needed – nursing, medicine, social work, education, and home economics. This sixth edition keeps all discussions as current as possible so that students can encounter the very latest thinking, and the most recent research.

The material is written in such a direct way that the book is more like a conversation than a traditional text. The author has worked hard to achieve a personal style with theoretical clarity and research rigour.

Bentzer, Warren R. **Seeing Young Children: A Guide to Observing and Recording Behaviour**. *Albany, New York: Delmar Publishers, 1985.*

This Guide is a practical book. Intended for students of early childhood education and child development, it can also be of use to in-service teachers and parents. A primary object for students is to learn about children – how they develop physically, socially, and emotionally. Observation is a means of obtaining some of this knowledge for its own sake, for course work, or for implementation in a child care or educational setting.

Several important features that help students achieve their objectives include: a) clear explanation of exactly how to observe, and what to observe; b) specific observational assignments and observational forms throughout the text and the instructor's guide; c) complete coverage of ethics and objectivity as they pertain to observation and working with children; d) key terms highlighted and defined within chapters; and e) an emphasis on observation.

Brazelton, T. Berry. **Touchpoints: The Essential Reference**. *New York: Addison-Wesley, 1992.*

From pregnancy to first grade, all the concerns and questions that parents have about their child's behaviour, feelings, and development are anticipated and answered in both chronological and reference form. Underlying this guidance is the touchpoints concept that has shaped the author's practice and research for over three decades. 'Touchpoints' are the universal spurts of development and the trying periods of regression that accompany them throughout childhood. In this book they are used as windows to help parents understand their child's behaviour and prevent future problems.

Part I follows each of these touchpoints from the prenatal visit through the first three years explaining the characteristic achievements and inevitable worries at each stage. Part II covers the first six years with all the common behavioural and emotional challenges. The author reveals how to understand these as the child's issues, warding off parent-child conflict.

Bredekamp, Sue (Editor). **Developmentally Appropriate Practice**. *Washington D.C.: National Association for the Education of Young Children, 1986.*

A tool for early childhood professionals, this book describes developmentally appropriate practices for adults providing services to young children. Part I gives the position statement of the National Association for the Education of Young Children (NAEYC) on developmentally appropriate early childhood programmes. Part II describes the vital development that takes place during the first three years of life and gives examples of appropriate care of infants and toddlers. This Part also includes a chart of developmental milestones of children from birth to age 3 and a list of sources for more information about programmes for infants and toddlers. Part III is designed for practitioners who care for infants or toddlers in group settings, describing appropriate and inappropriate practices. Part 4 includes NAEYC's position statement on developmentally appropriate practice in programmes for 4 and 5 year olds.

Caplan, Frank and Caplan, Theresa. **The First Twelve Months of Life**. *New York: Putnam Publishing, 1993.* **The Second Twelve Months of Life**. *New York: Putnam Publishing, 1992.*

These two books are definitive guides to infant development and personality during the first two years of life. A month by month guide, these indispensable resources will help parents understand and follow a baby's first and second years. Detailed information about motor, auditory, and visual development as well as growth in language, cognitive, and social skills is clearly presented. With this book parents also gain insight into the baby's eating and sleeping habits, fears, reactions to others, and memory retention.

These unique reference books, complete with growth charts and more than 150 photographs also include answers to the questions most commonly asked by new parents, as well as a brief overview of what to expect each month. Revised and updated to include the most current findings on developmental theory, *The First Twelve Months of Life* and *The Second Twelve Months of Life* are essential guides.

Caplan, Theresa and Caplan, Frank. **The Early Childhood Years. The 2 to 6 Year Old**. *New York: Putnam Publishing, 1983.*

Knowledge and understanding of how a child grows and learns can help parents and caregivers avoid many problems. As in *The First Twelve Months of Life* and *The Second Twelve Months of Life*, the authors share their experience in caring for children to guide caregivers throughout the third to sixth years of life.

Summarising much of the information in their first two books, Chapter One provides an overview of how a child grows during the first six years of life. The subsequent chapters present the major accomplishments in motor behaviour, adaptive behaviour, language behaviour, and personal social behaviour during the third to sixth years of life. A year by year discussion of the major stages and changes in development is accompanied by growth charts and practical suggestions for how parents can best respond to these new and exciting challenges. A final chapter presents information on selected issues which cut across ages including topics such as child abuse, learning disabilities, and single parent families.

Charlesworth, Rosalind. **Understanding Child Development**. *New York: Delmar Publishers, 1992.*

Understanding Child Development is designed for teachers and students. It is also a valuable tool for social service workers, special educators, parents, and others who require a practical understanding of the young child. It introduces the uniqueness of the young child as distinguished from the older child and shows how to work with young children in a way that corresponds with the child's developmental level. It presents a picture of the child in the context of family, school, and culture.

The young child and the means for studying his or her growth and development are introduced first in the text. Next, the child from conception to

birth is described, followed by infant and toddler development. The period from pre-school to primary follows with in-depth descriptions of physical and motor growth and development, ways of learning, and cognitive and affective growth and development. The next section describes the growth and development of the primary school child and highlights the continuity from pre-school to primary. Throughout, the critical role of both parents and teachers in a child's growth and development is stressed. The ways in which broader social and cultural factors influence the child's development are also discussed.

Those who work with young children agree that development and education are inseparable. In this text, developmental concepts are placed in a practical perspective. Theory, research, and practice are integrated in a way that applies to everyday interaction with young children.

Cole, Michael and Cole, Sheila. **The Development of Children**. *New York: Scientific American Books, 1992.*

This book combines traditional chronological and topical approaches to make as clear as possible the idea that development is a process involving the whole child. Drawing on and illuminating the insights provided by practical, theoretical and research orientations, and developmental psychology, the authors provide a broad foundation for understanding child development.

The first part describes the genetic basis of behaviour, prenatal development, and the birth process. Part II covers infancy from birth through the second year of life. Part III describes the major achievements of early childhood and covers the acquisition of language, cognitive development, and the influence of varied contexts on children's development during the years from 3 to 6. Part IV describes the biological and cognitive changes that contribute to making middle childhood, the years from 6 to 12, a distinctive stage of development in societies around the world.

Coletta, Nancy. **Understanding Cross-Cultural Child Development and Designing Programmes for Children**. *Richmond, Virginia: Christian Children's Fund, 1992.*

This book represents an attempt to understand the forces which influence children living in the developing world. The focus is on the interaction between the child, the family, the community, and the cultural worlds.

Chapter 1 asks basic questions about child development, what causes the differences in rates or patterns of development, and how the parent-child interaction influences child development. Chapter 2 looks at children's physical development as the foundation upon which social, emotional, and cognitive development are built. Special attention is paid to the long-term impact on children's behaviour and development. Chapter 3 emphasises how children of different ages have different ways of processing information and how caretakers can aid in the development of children's learning and cognitive capacities. Chapter 4 considers the adjustment of child care arrangements to developmental needs. Chapter 5 looks at procedures for

assessing development and presents a step-by-step plan for deciding when intervention is necessary. Chapter 6 looks at ways of managing the special mental health needs of children living in situations of violence, homelessness, disease, and poverty. Chapter 8 reviews programme strategies from around the world, looking at options and common problems of implementation.

Cryer, D. Harms, T., Bourland and B. **Active Learning Series.** *New York: Addison-Wesley Publishing Company, 1988.*

The Active Learning Series consists of 4 volumes; *Active Learning for Infants, Active Learning for Ones, Active Learning for Threes* and *Active Learning for Fours.* Each volume consists of hundreds of activities for children. The activities are easy to read and can be used with either one child or a small group of children. Ideas on setting up environments for infants and young children and an easy system for writing plans help caregivers set the stage for a good activity programme.

Each of the four books contains: a) a complete Planning Guide, b) Activities for Listening and Talking, c) Activities for Physical Development, d) Creative Activities, and e) Activities for Learning from the World Around Them.

Dodge, D.T., Koralek, D., and Pizzolongo, P.J. **Caring For Preschool Children. A Supervised Self-Instructional Program** *(Vols. I, II). Washington, D.C.: Teaching Strategies, 1989.*

This training program is a unique, personalised, easy to use, low-cost approach to staff development. It is filled with information that can be immediately applied. Teachers develop skills and knowledge by reading through and acting on suggestions designed for instant use in early childhood classrooms. They receive their own set of materials that become their personal resource and journal for working with pre-school children. There is not a set order to follow – teachers can concentrate on the issues that interest them most, on their own schedule, and at their own pace.

Volume I includes information organised around six major modules on how to create a safe and healthy environment in which children learn and have opportunities to develop physically and cognitively and to communicate their thoughts and feelings in interaction with caregivers and peers. Volume II contains seven modules and includes information on how to provide opportunities for children to be creative, to feel successful and competent, to develop social skills, and acquire self-control, for parents to participate in and receive support from the child care programme, for service providers to skillfully manage their programme or business, and for child caregivers to develop professionally.

Each module includes an overview, a pre-training assessment, four to seven learning activities, an end-of-month module self-review, a list of additional readings, answer sheets, and a glossary.

Einon, Dorothy. **Creative Play**. *London: Penguin Books, 1985.*

Almost everything a child does – when not asked to do something else – is play. It can be solitary, social, idle or energetic: it is frequent and repetitive but it is always creative in some sense. The author, who has made play her speciality, has written a book for parents and teachers with the child's point of view at heart.

A delightful and thoroughly practical book to help any parent discover how to stimulate a small child's senses and ability to learn from birth onwards, and how to present the world as an exciting and enthralling place. Illustrated age-appropriate ideas for play and games are presented for children in three age categories including; From Birth to Two Years, The Pre-school Years, and From Six to Ten Years.

Gordon, Ann, and Browne, Kathryn Williams. **Beginnings and Beyond**.
Albany, New York: Delmar Publishers, 1993.

Beginnings and Beyond was developed to promote the competence and effectiveness of new teachers through a presentation of basic knowledge, skills, attitudes, and philosophies. It is based on the premise that new teachers must have opportunities to learn fundamental skills as they begin their teaching experience.

This outstanding introductory text focuses on the important elements and critical foundations in early childhood education. The comprehensive coverage spans the entire range of early childhood education from infancy through primary. This third edition includes several important features such as a multicultural awareness with an emphasis on linguistic and cultural diversity, special editorial and focus boxes from leading experts in the field, increased attention to the concerns of special needs and at-risk children, and developmentally appropriate curriculum guidelines. Current trends and issues effecting children and their families are integrated with the material pertinent to the beginning teacher.

Harms, Thelma and Clifford, Richard. **Early Childhood Rating Scale**.
New York, New York, 1980.

This Rating Scale gives an overall picture of the surroundings for the children and adults who share an early childhood setting. Using sub-scales, seven aspects of the environment are assessed including; 1) Personal care routines of children 2) Furnishings and Displays, 3) Language and Reasoning Experiences, 4) Fine and Gross Motor Activities, 5) Creative Activities, 6) Social Development and 7) Caregiver's Needs.

This Rating Scale can be used by individuals with a wide range of roles and responsibilities related to early childhood settings. It can be used by classroom teachers, directors or principals, and other professionals, trainers, or planners. Since the Scale covers the basic aspects of early childhood activities, it can be used in a wide range of settings such as day-care centres, play-groups, and pre-school programmes.

Harmes, Thelma and Clifford, Richard. **Family Day Care Rating Scale**. *New York, New York: 1989.*

The increased concern over the effect of day care on children's lives has focused attention on the quality of that care. This Guide, an adaptation of the Early Childhood Rating Scale, provides an easy to use resource for evaluating family day-care settings. Developed through lengthy field-testing, research, and revision, this rating scale consists of 32 items, organised under six major headings. 1) Space and Furnishings for Care and Learning, 2) Basic Care, 3) Language and Reasoning, 4) Learning Activities, 5) Social Development and 6) Adult's Needs. Eight additional items are included for rating a day-care home's provision for children with special needs. This scale will serve a number of important functions as a self-assessment tool for family day-care providers, as a quality measure for state and private monitoring agencies, and as a valuable guide for concerned parents. The established reliability and validity of the scale make it particularly useful for early childhood research and training programmes.

Harris, Judith R. and Liebert, Robert, M. **Infant and Child: Development from Birth through Middle Childhood**. *Englewood, New Jersey: Prentice Hall, 1992.*

This is a book about how children develop from conception through middle childhood. A transactional view of development provides the underlying theme. In this view, children are seen as playing an active role in their development, not as passive recipients of environmental forces.

After the three Introductory chapters, contained in Part 1, the book is organised chronologically, starting with prenatal development and continuing through late middle childhood. Part 2 (Infancy and Toddlerhood), Part 3 (Early Childhood), and Part 4 (Middle Childhood) each begin with the major focus placed on the child who has just entered that period. This introductory chapter is followed by two more chapters; one on social and personal development, and the other on cognitive development or, in the case of the school-age child, school achievement. An entire chapter is devoted to the various factors that affect how much a child will learn in school. Each chapter ends with a summary and list of 'key terms'.

Lansdown, Richard and Walker, Marjorie. **Your Child's Development From Birth Through Adolescence**. *New York: Alfred A. Knopf, 1991.*

This book is designed to guide parents in the process of helping a child develop from birth through adolescence. It helps parents to understand how babies and children grow, physically, mentally, and socially – how they learn to walk, talk, and play, develop reasoning powers and morality, make friends and gradually become independent of the family. This book is devoted to child development on the same scale and authority as the classic child care books and incorporates the latest findings in the fields of genetics, physiology, language, psychology, and education. The authors illuminate both the grand patterns of development and the details that make every child, and family

unique. Dozens of separate boxed sections treat particular subjects such as how to tell when growth or language acquisition is too slow, how to test a baby's reflexes, what to do about fears and frustrations, and timetables for growth and maturation.

Your Child's Development is an essential reference book that is at the same time a comfort, an inspiration, and a guide.

Leach, Penelope. **Your Baby and Child: From Birth to Age Five.** *New York: Alfred A. Knopf, 1989.*

This book addresses both the physical and psychological well-being, concerns, and needs of the child. Using practical language, the author demonstrates that caring for a child can be a joy as well as a challenge. She describes what is happening to the child, what the child is feeling and experiencing from the moment of birth until the time the child enters the world of school.

For each stage of development the basics of feeding, sleeping, eliminating, teething, bathing, and dressing are discussed. Ways to help children develop hand-eye coordination, and ways to help him or her listen and speak are emphasised. She illustrates the importance of play, and how play stimulates the child to use his or her body and senses to develop thinking and intelligence.

Lundsteen, Sara Wynn, and Tarrow Norma Bernstein. **Guiding Young Children's Learning. A Comprehensive Approach to Early Childhood Education.** *New York: McGraw-Hill, 1981.*

This book covers early childhood from infancy through the primary grades and includes not only typical children but also the gifted, the handicapped, and the disadvantaged. It goes beyond the school and its staff to discuss the involvement of parents and the community. The author assumes a developmentally interactionist perspective and emphasises creative problem solving by young children and respect by teachers for each child as a developing, autonomous learner.

The material is divided into four parts. Part One provides background in the history of early childhood education and the current state of the art. Part Two covers the development of the child and suggest directions for educators to establish a theoretical base for education and presents a point of view based largely on developmental research. Part Three deals with curriculum designed to promote cognitive, affective, and psychophysical-motor abilities. Part Four discusses the special strategies teachers will need to encourage children's symbolic play and problem solving.

Throughout the book, the authors emphasise that teachers, like children, learn and discover from the inside out. But in learning, everyone needs a point of view, a theoretical base, and exposure to the thoughts of others. It is these things this book so uniquely attempts to provide.

Maxim, George W. **The Very Young: Guiding Children from Infancy Through the Early Years**. *New York: Maxwell Macmillan International, 1993.*

One of the central aims of this edition is to help the student of early childhood education understand how theory and research can be translated into child-centred, developmentally appropriate practices for children as they grow from infancy through the pre-school years. Separate chapter-length coverage is given to developmental concepts and to the notion of developmentally appropriate practice. Individuals should acquire a conceptual framework essential for organising and establishing a nurturing, respectful environment for young children.

The text offers a meticulous introduction to the process of teaching and caring for the very young. It offers a comprehensive overview of current theory and practice as well as a perspective on the historical evolution of the field of early childhood education. Central to the book is a strong concern for applying theory to appropriate practice.

Each chapter begins with a photo to highlight the topic under discussion. Following the chapter-opening photo is a brief list of questions designed to guide the reader's thinking. Short 'Episodes to Ponder' lead the reader into the actual content of each chapter. Throughout each chapter, practical ideas are highlighted in boxed displays. Students will appreciate these 'nuts and bolts' suggestions for working with young children. A brief summary of the major topics within each chapter as well as thoughts for reflection are featured at the end of each chapter.

Rathus, Spencer A. **Understanding Child Development**. *New York: Holt, Rinehart and Winston, Inc., 1988.*

The overall aim of Understanding Child Development is to communicate in context and form the excitement, relevance, and true scientific nature of the discipline of child development. Chapter 1 is a formal presentation of the history of ways of viewing child development and of contemporary research methods. Chapter 2 is an in-depth discussion of the major theories of child development that influence the field today. Chapters 3-5 discuss the more biologically oriented areas of development including: heredity, prenatal and neonatal development, and physical and motor development. Chapters 6-9 cover perceptual and cognitive development. Chapters 10-13 include social and emotional development, and Chapter 14 covers development of behaviour disorders.

The general thrust in the chapters is from the biological to the social and emotional aspects of development. Although these topics and areas are presented consecutively, the author also endeavours to show how they overlap, and how understanding of one area enhances understanding of the others. In each area great emphasis is placed on research methodology, up-to-date research findings, and theoretical integration of research.

Although *Understanding Child Development* provides an accurate picture of the scientific nature of child development, it was written with the needs of

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students in mind. Using energetic prose, it attempts to make the most abstract concepts accessible. A number of learning aids and features include for example: Chapter Outlines, Truth of Fiction Sections, Glossaries, Illustrations, and Chapter Summaries. These tools help to highlight the relevance of theory and research in child development to everyday life.

Shelov, Steven, P. (Editor). The American Academy of Pediatrics: **Caring for Your Baby and Young Child.** *New York: Bantam Books, 1991.*

This book provides sound, reassuring advice on child rearing, plus the latest scientific information parents need to know to safeguard the child's health and development. *Caring for Your baby and Young Child* offers a comprehensive parenting manual which covers a wide range of topics from preparing for childbirth to attachment and basic child care. It provides a chronological guide to the baby's first five years emphasising growth, behaviour, and development. Each chapter includes nutritional guidelines, and provides practical advice for dealing with fears and temper tantrums, health watch features that alert parents to potential problems at each stage and advice on developing the child's self-esteem, effective discipline, and strategies to create an optimal nurturing environment.

In addition, the book also contains an encyclopedic guide to recognising and solving health problems, and provides clear and straightforward information on common childhood diseases and health concerns. Detailed, accurate, and up-to-date, Caring for Your Baby and Young Child is an essential child care resource for all those who want to provide the very best care for children.

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Enhancing the quality of early childhood training

1 **Introduction to the training package**

2 **Delivering effective training**
Training methods and techniques

3 **Guide to the development of the young child**
Reference materials: comprehensive information on the development of babies and young children, particularly their psycho-social development

4 **Rationale for experiential/participatory methods**
Reference materials: the rationale for advocating these methods

5 **Resource list**
An annotated list of selected training materials

Guide to the development of the young child

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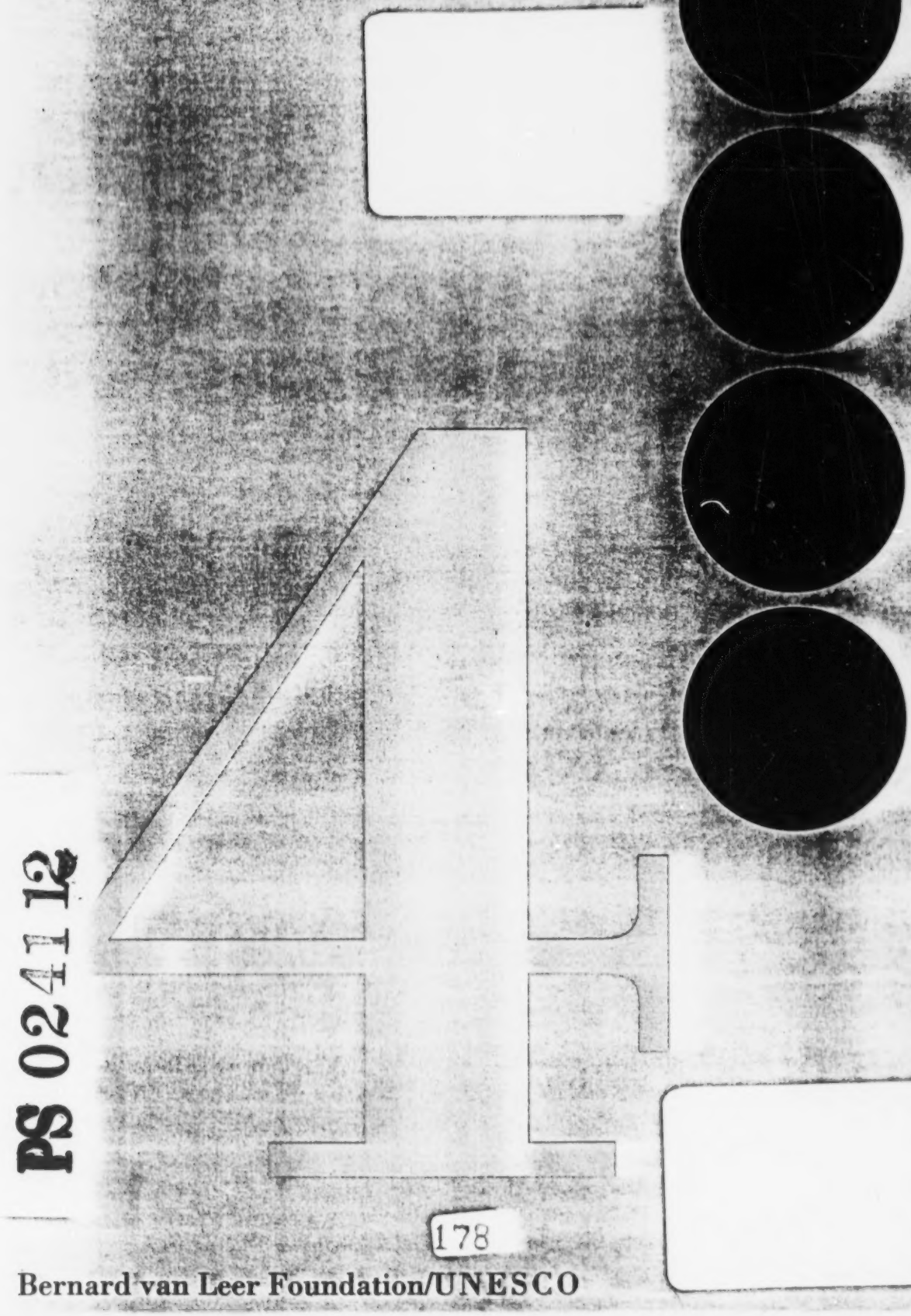
Enhancing the skills of early childhood trainers



Rationale for experiential/participatory methods

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I hear and I forget;
I see and I remember;
I do and I understand.

Ancient Chinese proverb

USING THIS TRAINING PACK

This Training Pack is intended to persuade, not to prescribe. We want readers and users to take from the Pack whatever fits comfortably with themselves and their work, to use the suggestions if and when it suits them, and to be creative in adapting the ideas to their own circumstances and inventing new ones.

The Pack can be used by individual trainers or by groups of trainers. It will probably be most effective if a group of trainers meet together to discuss issues raised in the Pack and try out the activities. It can also be used by individual trainers as a selflearning pack.

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1 Experiential learning

This part of the training pack provides a rationale for the active experiential learning approach to training which is advocated throughout the pack.

Before moving on to review this body of theory, there is need to state why the Bernard van Leer Foundation is committed to the active experiential mode of training.

Underpinning the Foundation's Mandate are a number of principles which guide the Foundation's work with children, families and communities. These principles include:

- the empowerment of people and communities
- building on the strengths of individuals and communities
- the development of confidence and greater control over their own lives of people and communities living in disadvantaged circumstances.

Experiential learning has as a central part of its agenda an ethos that students should:

- have greater control over their learning
- build on their own experience
- develop their own self-confidence and thus empower themselves.

trainers/educators must be willing to relinquish some control of the learning process

The participation and involvement of students/learners are essential in this process. To ensure that this happens, trainers/educators must be willing to relinquish some control of the learning process.

It is clear that training in the active/experiential and participatory mode is the method that best complements the principles of the Foundation.

Much of the Foundation's work occurs in the fields of adult education, community education and development and the training of para-professionals. These are exactly the areas in which experiential learning has developed most and proved particularly effective.

Many trainers/educators are far more familiar with the traditional didactic methods so common in schools and universities. For those with a purely academic background, experiential learning methods and philosophy may be very unfamiliar. This paper will attempt to condense the diverse literature on experiential learning and incorporate some relevant theoretical perspectives. It is clear that some trainers/educators need cogent arguments to convince them that an active experiential learning approach will result in more effective

training than traditional didactic approaches. It is our hope that this paper will provide a body of theory about experiential learning which will support personal experiences of this method. In addition, at the end we have provided a list of references and a bibliography to allow those who wish to, to follow up more theoretical interests. Other parts of this Training Pack contain more information on participatory and experiential methods.

The body of theory relating to experiential learning includes:

- theories of learning and teaching
- experiential learning *per se*
- the relationship of theory and practice in training
- adult learning and adult learners.

Each of these will be discussed below.

What is experiential learning?

the process whereby knowledge is created through the transformation of the experience of the learner who is at the centre of the learning process

Experiential learning has been defined as **the process whereby knowledge is created through the transformation of the experience of the learner who is at the centre of the learning process**. This definition was formulated by Kolb (1984), an acknowledged leader in the field of experiential learning theory.

Experiential learning is as old as recorded history. Nearly all learning is, at bottom, a mix of the experiential and the didactic. Someone learned by doing and then informed others of what was learned. As knowledge grew, language and instruction became the preferred way of teaching. However, when knowledge was required for acting in the world, learning by doing was also essential.

In the teaching of skills, practice has always been central. For example, in medieval Europe, systems of guilds and apprenticeship grew up. Today, the common phrase *'practice makes perfect'* acknowledges the learning that comes from experience.

Experiential learning methods present a challenge to trainers and educators. Trainers have to give up some power and control of content to students, modify time honoured methods and be more open to criticism. Kolb (op cit), not surprisingly, refers to distrust of the student's own experience and experiential methods as sources of learning. He related this distrust to the revolution in technology coming out of scientific method. This has convinced us that the only things really worth knowing are those that can be proved by scientific experiment.

Attempts to introduce experiential learning methods into teaching situations have sometimes earned the description 'gimmicky' and 'faddish'. Chickering (1977), an academic himself, says that: *'There is something about experiential learning that raises the hackles of even the most unflappable academics'.*

However, as Kolb puts it,

> *'Experiential learning is not a series of techniques to be applied in current practice but a programme for profoundly re-creating our personal lives and social systems.'*

There are distinct signs of progress in accepting experiential learning:

- increasing dissatisfaction with and challenge to traditional examinations and diplomas as indicators of human abilities
- strong movements to validate previous experience as an element of vocational training
- increasing use of active experiential training methods in business and management training.

Chickering (1977), pointing out the need for universities to change, supports Kolb's view of the social and personal effects of experiential learning:

> *'... there is no question that issues raised by experiential learning go to the heart of the academic enterprise. Experiential learning leads us to question the assumptions and conventions underlying many of our practices. It turns us away from credit hours and calendar time towards competence, working knowledge and information pertinent to jobs, family relationships, community responsibilities and broad social concerns. It reminds us that higher education can do more than develop verbal skills and deposit information in those storage banks between the ears.'*

Historical overview

Writers on experiential learning theory Keeton (1982), Kolb (1984) and Wilson et al (1989), are agreed on the chronological progress of modern experiential learning theory beginning with John Dewey and his 'Experience and Education' (1938). However, Keeton (op cit) traces its roots to Aristotle, who, in Ancient Greece, observed phenomena at first-hand, reflected, and discussed with others to advance his knowledge.

Dewey, in attempting to formulate a philosophy of progressive education as opposed to traditional education, outlined the differences. In imposing from above, traditional education:

- depends on external discipline and learning from texts and teachers
- ensures acquisition of isolated skills and techniques by drill and rote learning
- prepares for a remote future
- functions on the basis of static aims and materials.

In contrast, progressive education:

- cultivates and expresses individuality
- encourages free activity and learning from experience
- views the acquisition of skills as a means of attaining desired ends
- makes the most of the opportunities of the present
- comes to terms with and embraces a changing world.

Dewey concludes:

there is an intimate and necessary relation between the processes of actual experience and education

> *'I take it that the fundamental unity of the newer philosophy is found in the idea that there is* ***an intimate and necessary relation between the processes of actual experience and education.'*** *(our emphasis)*

What is meant by the term **'traditional education'**? Essentially, Dewey is referring to cognitive and behavioural learning theories which underpin much of the education and training that is going on today – and not only in universities. Most para-professionals in developing countries are trained by the behavioural/cognitive method. Jones (1986) goes as far as to say that **behaviourism** dominates teacher education today.

Behavioural/cognitive methods deny any exercise of consciousness on the part of the learner or any contribution of subjective experience to the learning process. They ignore the affective dimension of learning, the **feelings** of the learner and concentrate on the acquisition, manipulation and recall of abstract symbols. The learner acquires facts in isolation from other aspects of his/her life and regurgitates them in examinations. The assumptions behind these traditional methods of assessment of learning are that if students are able to regurgitate information, they are also able to diagnose and act upon it.

Jones (op cit) describes the aim of behaviour modification as the achievement of

> *'measurable changes in observable behaviour' with 'reinforcers, positive and negative, employed to produce the behaviours that someone has defined as desirable and appropriate.'*

A good illustration of this, recalled by one of the authors of this pack, concerns a student who had successfully completed her teacher training degree course in a college committed to experiential learning. She decided to undertake a social work training course. As this new training course worked to behavioural principles, she was distressed when she was penalised for introducing her own ideas into course work essays. She was informed quite categorically that if she wanted to get high marks on course work and examinations she should 'toe the line'. In Chickering's (op cit) words, her learning should be:

> *'... synonymous with what one gleaned from books and college lectures, which are, for the most part, a regurgitation of still more books.'*

This student made a conscious decision to give her tutors what they wanted, so that she could gain her professional diploma. However, she preserved her commitment to experiential learning when she became a manager and a trainer in her social work career.

Coleman (1976) has made a more measured comparison of traditional and experiential learning. He describes traditional classroom learning as *'information assimilation'* and sets out the steps in the process. These, in sequence, are:

- receiving information through a symbolic medium (books, lectures)
- assimilating and organising information to understand the principles (the point at which information becomes knowledge)
- ability to infer a particular application from a general principle
- movement from the cognitive to the sphere of action.

He describes the steps in experiential learning as being almost the reverse of the steps in traditional learning. The experiential learning steps are, in sequence:

- action and effects of action
- understanding these in the particular instance
- understanding that the general principles governing the particular instance may require further testing action
- application through action in new circumstances within the range of the generalisation.

Following Dewey, another major contribution to the development of experiential learning theory stemmed from the work of Kurt Lewin, who has had a profound influence on the discipline of social psychology and the field of organisational behaviour. A central theme for Lewin was the integration of theory and practice. He is remembered by his best known quotation, *'There is nothing so practical as a good theory'*. Lewin's work in the 1940s on group dynamics and his methodology of action research and laboratory training have now been widely adopted.

Many will remember the 1950s as the time when group dynamics was an important area of study. T-Groups ('T' stands for training) emerged as the most important and dramatic illustration of group dynamics. In brief, T-Groups were training programmes which started with group discussions and decision-making activities. They were non-hierarchical, i.e. staff and students related to each other as peers. Research and training staff observed interactions and recorded the activities. The analysis of this data was done each evening by the staff, who felt that it would be too difficult for students to be involved in discussion of their own behaviour. However, as some students asked to be involved in the analysis, it was eventually recognised that the real value of the training was found in a shared focus on actual behaviour and its discussion and analysis. As Kolb puts it:

> *'Thus the discovery was made that learning is best facilitated in an environment where there is dialectic tension and conflict between immediate, concrete experience and analytic detachment.'*

Underlying the action research and laboratory training approach were Lewin's circle or feedback concept and learning process. This consisted of:

- concrete experience
- observation and reflection
- formation of abstract concepts and generalisations
- testing of the implications of the concepts in new situations
- feeding back again to concrete experience.

This is very similar to Coleman's (op cit) steps in experiential learning.

Piaget challenged the belief that intelligence is an innate, internal characteristic of the individual; he believed that intelligence is shaped by experience and that learning arises from the interaction of the individual with his environment

No doubt the 'Lewin' stage in the evolution of experiential learning theory with its emphasis on 'scientific' and 'research' methods gave some reassurance to doubters, followed as it was by Jean Piaget's theory on how children learn. Piaget challenged the belief that intelligence is an innate, internal characteristic of the individual; he believed that intelligence is shaped by experience and that learning arises from the interaction of the individual with his environment.

According to Piaget, the stages in the child's development:

- begin with concrete actions of feeling and touching
- proceed to reflection and the conversion of actions into images
- go on to give shape to experiences by drawing on concepts formed
- test the implications of the theories with concrete action.

In simple practice terms, this meant that in many schools the teaching of mathematics no longer depended on the learning of tables by rote. Instead the teacher provided experiential activities. From experiments with cuisennaire rods, water and beakers and feathers and sand, the child began to learn concepts of length, volume and weight.

The similarities between Piaget's and Lewin's theories are obvious. The main difference is that the former applied them to children's learning while the latter applied them to adult learning. In addition, there was a greater emphasis on cognitive learning in the work of Piaget.

Another important element in experiential learning theory is the **affective dimension**. In outlining the elements of traditional learning theories, it was noted that such learning theories ignore the **feelings** of learners. The affective dimension was placed firmly into experiential learning by notable theorists and practitioners in the field of psychoanalysis, counselling and psychotherapy, among them Carl Jung, Carl Rogers, Fritz Perls and Abraham Maslow. They brought to the theory the concept that the healthily adapted adult and therefore the effective learner is one in whom the cognitive and affective processes are successfully integrated. This learner's emotional development keeps pace with his or her social development throughout the life cycle.

The final contributors to experiential learning theory to be briefly considered in this historical overview are the 'radical educators', Paulo Freire (1974) and Ivan Illich (1972). The former had his greatest influence in Latin America, the

latter in the USA and the UK. Both Freire and Illich see traditional teaching and learning methods as instruments of repression, a means of social control.

Central to Freire's work with peasants in Latin America is the dialectic between abstract concepts and subjective personal experience. Through dialogue between ordinary people and facilitators, in which all are equal, the experiences of everyday life are studied. Their underlying meanings are explored, abstract concepts are created and freedom for action follows.

Illich embraces similar theories to Freire but applies them to young people and college students in the industrialised world. As his view is that no real learning takes place in educational institutions, he calls for the 'de-schooling' of society.

2 Theoretical perspectives

Experiential learning and the concept of knowledge

Kolb (1984) and Chickering (1977) put forward theories of experiential learning which, while firmly rejecting traditional behavioural/cognitive learning models, do not minimise the importance of the cognitive dimension in learning.

Avalos (1991) takes a similar stance in relation to teacher education. She suggests that there are three types of teaching theory:

- behavioural
- teacher as facilitator
- interactive.

Her favoured type is the interactive. She says:

> *'An interactionist approach will focus less on prescribed doses of content and more on the processes by which a student teacher converts these into personal knowledge.'*

Kolb provides us with a definition of learning:

> *'Learning is the process whereby knowledge is created through the transformation of experience.'*

Learning is the process whereby knowledge is created through the transformation of experience

He goes on to point out the importance of this definition for experiential learning theory. He emphasises:

> *'... the process of adaptation and learning as opposed to content or outcomes ...' shows that '....knowledge is a transformation process, being continuously created and recreated, not an independent entity to be acquired and transmitted ... and it indicates that '...learning transforms experience in both its objective and subjective forms.'*

Keeton (1982) has a simpler definition:

> *'Experiential learning is defined as learning in which the learner is in direct touch with the realities being studied.'*

Some questions need to be asked about Keeton's use of the word 'direct' and his use of the present tense. Experience (realities) can be defined in two ways in the context of experiential learning. Our own terms for these two forms of experience are '**natural**' and '**constructed**'. The one refers to the experience

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gained from life which precedes the reality to be studied, while the other refers to the structured experiences which may be an integral part of the study.

For example, the student of child development may bring to that study experience of rearing his or her own child. In addition, during the study/training period, he/she may be required to undertake an in-depth study of one particular child in a school or day care centre. Both **experiences** contribute to the learning process. On this premise, Keeton's definition ought to read '*...is* ***or has been*** *in direct touch...*'.

Kolb asserts strongly that:

> *'... to understand learning we must understand the nature of knowledge and vice versa.'*

He goes on to analyse knowledge in a scholarly and complex way. To paraphrase his theory, experiential learning is seen by him as a four-stage cycle (Coleman's learning steps and Lewin's feedback concept) involving four adaptive learning modes:

- concrete experience
- reflective observation
- abstract conceptualisation
- active experimentation.

From this starting point, Kolb develops his theory stating that the four modes identified above produce four different learning processes. In turn, these combine to produce four different kinds of knowledge. He then goes on to analyse people's learning styles according to which types of knowledge and learning processes they employ and feel most comfortable using.

Kolb uses this structure to show that the learning process is not identical for all human beings. Individual learning styles can be illustrated by the emphasis that the learner places on the four elements of the cycle. It is important to note that Kolb sees **no hierarchical distinction between different learning styles.** Most people develop learning styles that emphasise some learning abilities over others, as we all have some weak and some strong points.

The highest level of learning or a hypothetical 'perfect learner' would have a combination of all four learning styles. Perhaps the most important point for us is that in Kolb's words:

> *'Early educational experiences shape individual learning styles: we are taught how to learn.' (our emphasis)*

Kolb goes further on the issue of the validity of different kinds of knowledge. He talks of *personal* knowledge and *social* knowledge. The former is a combination of apprehension of experience and the socially acquired comprehension which one uses to explain the experience. The latter, (sometimes described as 'external' knowledge), is 'an independant, socially

transmitted network of words, symbols and images, based solely on comprehension'. Kolb reminds us that, in the learning situation, personal and social knowledge are closely linked:

> *'Knowledge does not exist solely in books, mathematical formulae or philosophical systems; it requires active learners to interact with, interpret and elaborate these systems.'*

Unfortunately:

> *'The modern tendency is to embrace the comprehension pole of the knowledge dialectic and to view with suspicion the intuitions of subjective experience.'*

A final quotation from Kolb is most relevant:

> *'In this emerging information society, severe alienation can result when there is incongruity between personal knowledge and social knowledge. This is illustrated most dramatically by the alienation of the poor, whose street-wise way of learning doesn't fit with the symbolic/technological knowledge of the university; or, more subtly, it is illustrated by the creative writer who is 'turned off' by the pedantic critical climate of her English literature department, or the adult who returns to college and finds little recognition for a lifetime of learning by experience.'*

This quotation raises important questions about the implications of experiential learning for different cultures, for different social classes within a society and for adult learning.

Cultural differences and experiential learning

Kolb sees the problem for 'the poor' as one of alienation, or: *'[the] ...incongruity between personal knowledge and social knowledge'*. Faundez (1988) goes further in his emphasis on the link between knowledge and power. In his view, society is imbued with:

an ideology of domination that underestimates popular knowledge and overestimates scientific knowledge

> *'an ideology of domination that underestimates popular knowledge and overestimates scientific knowledge'.*

He believes that ownership of scientific/social knowledge is in the hands of the educated, the prosperous and ultimately the people of 'developed' countries. The uneducated or those with limited formal education, the poor and the people of developing countries are seen to possess only what is viewed as inferior personal/popular knowledge.

Faundez sees the key to change as being in the hands:

> *'of a new kind of intellectual ... a technician and an animator all in one.'*

This new kind of intellectual should be responsible for:

> *'the transfer of scientific and theoretical knowledge ... through permanent dialogue with the people.'*

Thus *'the people'* will *'grasp'* and make their own, the knowledge that is created by the fusion of personal and social knowledge. They will move towards transformation of their own lives, after reflecting on and active experimenting with the knowledge they have created.

According to Faundez, the *'new intellectual'* will not dominate those who are considered *'ignorant'* by using *'the authoritative act of speech'* which is the prerogative of those who own knowledge and power. They have the culture of speech, while the *'ignorant'* have the culture of silence and *'must listen to the "truth" and receive the knowledge transmitted by him "who knows."'*

Recognition of the arguments about the ownership of knowledge is important for those who work in the development field, and the use of experiential learning approaches indicates a valuing of personal knowledge and a recognition of it as an essential complement to social knowledge. There are, however, other implications of introducing experiential learning approaches in different cultural contexts.

For example, teaching and learning in most developing countries are highly dependent on the traditional modes outlined earlier. Barkatoolah (1990) puts it this way:

> *'there is a tendency to concentrate primarily on teaching them [teacher trainees] didactic capabilities and skills so that they can take up their functions efficaciously, to the detriment of the teacher as a person with all the interior resources and potential he has amassed and which he can call upon in his work.'*

Barkatoolah believes that this tendency accounts for low self-esteem among teachers in developing countries and high turnover, especially in rural areas.

At the same time, Wilson et al (1989) make the point that if the learning experience directly confronts the belief system of the learner, then he or she will not learn.

The problem is that learners in developing countries have been **taught how to learn**. They believe that formality, distance and passivity are essential elements in learning. Experiential learning is not trusted precisely because it lacks these elements.

Kolb confronts this dilemma:

> *'One's job as an educator is not only to implant new ideas but also to dispose of or modify old ones. In many cases, resistance to new ideas stems from their conflict with old beliefs that are inconsistent with them. If the education process*

> ***begins*** *by bringing out the learner's beliefs and theories, examining and testing them and then integrating the new, more refined ideas into the person's belief systems, the learning process will be facilitated.' (our emphasis)*

Academics who support traditional learning styles often stress that experiential learning approaches are only suitable for those who cannot aspire to what they see as higher levels of learning.

Gartner (1976) makes the point that:

> *'Experiential learning is a mode of learning more amenable to the realities of the lives of those who have been excluded from the traditional model.'*

Gartner was writing as one committed to the experiential learning mode, but the danger is that experiential learning is seen as **only** appropriate for the restricted group Gartner refers to. If that view were accepted, it would preserve the hierarchies of learning referred to earlier. However, many of the exponents of experiential learning (Kolb, Keeton, Chickering et al) make a point of relating their ideas firmly to university teaching and learning, as they are highly critical of their own academic milieus.

Concern that experiential learning should not be seen as appropriate only for those of limited formal education also applies to adult education. Yet the eminent suitability of experiential learning approaches to adult education should not be minimised.

● Adult learning and adult learners

> *'It was once thought that the best years of life for learning were over by the time a person had reached intermediate school. But this springs from a conception of learning as an assimilation of information rather than as the transformation of experience into ever more maturing insights and the development of the self into an ever more responsive and responsible participant in a mutually fulfilling society.'* (Keeton et al 1976)

This quotation highlights the differences between **pedagogy** (literally, the art/science of teaching children) and **andragogy** (the art/science of teaching adults as adults and not as children).

Pedagogy is characterised by the following:

- inferior roles (children) and superior roles (teachers)
- the teacher is the central figure in the learning process
- the teacher gives and the pupils take
- the teacher's only responsibility is to teach and is thus absolved of responsibility for ensuring that **real learning** takes place.

Clearly the dependent role of children requires that the teacher should be in control. Nevertheless, many recognise that the more learner-centred approach

of andragogy also applies to children. This accounts for the child-centred or learning by discovery approach which was fashionable in industrialised countries in the 1960s and which is still supported by many educationalists. Unfortunately, the opposing view is also prevalent, i.e. that adults should be taught by pedagogical methods.

Why is the pedagogical approach inappropriate? If we look at the characteristics of **andragogy,** we see that the emphasis is:

- on **learning** rather than on teaching
- that adult learners share responsibility with teachers for their own learning
- that adult learners are actively involved in the learning process
- and teachers of adults adopt a very different role from that of pedagogue.

The pedagogic approach is unsuitable for adult learners because it depends on the compulsory presence of the learners, though adults enter learning voluntarily and can withdraw at any time. Also, while the teacher's superiority depends on age, experience and knowledge, adult learners also have a great deal of knowledge and experience from previous learning and practice. Finally, we cannot assume passivity on the part of the learners. Adults have developed opinions and beliefs which prepare them for dialogue, not for acceptance of a passive, receiving role.

adults, like children, often enter a learning situation with uncertainty and trepidation. Many of them have already been accustomed to a pedagogic approach which has deflated their self-image

Nevertheless, adults, like children, often enter a learning situation with uncertainty and trepidation. Many of them have already been accustomed to a pedagogic approach which has deflated their self-image. Since their present self-image derives from their experience, their profession, their achievements and their social roles and status, their self-regard will be shaken if the new learning situation does not build on this experience. Stanley (1987) puts the point strongly:

> *'They [adult learners] tend to place great value on their experience and can be quite "touchy" if it is ignored or its worth minimised; they feel affronted, slighted, ignored, insulted.'*

Stanley indicates a more active form of opposition to pedagogy among adult learners. Frequently the result is increased passivity, an acceptance of 'teacher knows best' and little or no real learning.

Andragogy, in contrast, seeks to give the learner control of his own learning in line with his personal motivation. Barkatoolah (1990) explains:

> *'The adult will be more inclined to change or to learn on the basis of* ***how he wants*** *to grow and change rather than on objectives fixed by others and out of his control.'*

The adult's learning will begin when his experience and status are valued. Barkatoolah again:

Today, in fact, it is thought that the adult learns better when the matter being learned or the methods used can be linked to his previous experience and that this experience can be reinvested in the new learning process. It is also thought that learning by an adult is more a matter of transforming past experience (re-organisation of his ideas, his values, etc.) than of training (i.e. the acquisition of knowledge).'

It has already been suggested that andragogy requires a different kind of 'teacher' from the one who uses pedagogical methods. Stanley (op cit) describes the adult educator as *'a procedural technician, resource person and co-enquirer'*. Wilson et al (op cit) suggest five main functions for the adult educator committed to experiential approaches to education:

- understanding the personal and social history of the individual
- arranging the learning environment to promote experiential learning
- preparing learners to engage with contradictory circumstances
- creating and posing problems to be resolved
- facilitating dialogue and reflection on the learning experience.

This relationship between theory and practice is illustrated by the following example provided by one of the authors of this pack:

A language teacher was among a group of experienced secondary school teachers attending a course in Pastoral Care and Counselling at a college of education. They were all preparing to take on new pastoral roles in addition to their subject teaching. In a personal tutorial at the beginning of the course, the language teacher showed herself to be a dedicated traditional teacher, though with a 'caring' attitude.

Her personal life was ordered and stable, she was married but without children of her own. The problem was that her new pastoral care duties, as Head of the Fourth Year (14-15 years old), would require her to work with pupils across four streams of descending ability. As she had previously worked only with academically oriented children, she naturally, felt a high level of anxiety. The pastoral care course had a practical placement at its core. To enable participants to develop new skills in their own work situations, they were all placed in their own schools for one day per week during the full-time course. On her placement, the language teacher was asked to run a group at her school for a small number of persistent truants, (children who frequently failed to attend school without the knowledge of their parents). She would have an open agenda to learn more about these truants and their interests.

Preparation and support for placements was dealt with on both an individual and group basis. As adults, the 'students' in her group had as much, if not more, to offer each other than had the tutor. The language teacher, for example, was already 'engaging with contradictory circumstances', as the 'problem' of relating to different and difficult pupils was newly 'created and posed'.

Each week of the placement, 'a dialogic and reflective processing of the experience' took place with the tutor and the group. As a result, the teacher learned and grew in her role, facing her pastoral responsibilities with greater understanding and increased confidence. Best of all, she learned to relate differently and effectively to pupils with methods which she could also use in the future in her language teaching role.

Theory and practice

The example on the next page presents another important aspect of experiential learning: the relationship between theory and practice. In this case 'practice' refers to 'constructed' experience (see earlier discussion of 'natural' and 'constructed' experience). Ideally, training practice (or the practicum) gives students an opportunity to:

- experience the reality of the profession/job for which they are preparing
- undergo that experience in a challenging and supportive situation
- be able to reflect and discuss the experience
- see clearly the connections between the practice and the theoretical parts of the training.

At worst, the practicum gives only lip-service to the value of practice. It is included because it is expected, but consists only of observation rather than providing an active role for the student. It is seen as having only tenuous connections with the theoretical part of the training.

In fact, in the majority of training courses, the emphasis in training is on theory. This is despite the fact that entrants to professions often complain that their training has given them inadequate preparation to actually do the job for which they are being trained. A magazine article by John Collee (1990), a British doctor, illustrates the point:

> *'In reality your medical training begins after you graduate. You learn medicine through a kind of apprenticeship – working for hours under close supervision until the basic skills become second nature .... I can't help thinking that the tremendously long theoretical training is partly for show – designed specifically to make medicine look difficult and therefore to increase the intellectual status of doctors in society.'*

In discussing teacher training, Jones (1986) suggests another explanation for the emphasis on theory. In her view, 'behaviourism dominates' teacher training as the training always aims to measure changes in behaviour. Jones argues that the ability to learn abstract theory can be **measured**. Teachers work rigidly to a course curriculum which they plan and deliver. Examinations then test the students' abilities to recall what they have absorbed or, too frequently, learned by rote. While practice is less easy to measure, attempts have been made to make practice conform to behavioural principles, for example, by requiring students to produce 'model' lesson plans.

These are not arguments for dispensing with theory or assessment in training. However, an important point emerges. **Although the terms are frequently used synonymously, training and education are not the same**. Stanley (op cit) sees learning as the critical factor in both but defines education as:

> *'... concerned with cognitive learning or the assimilation of knowledge or*

concepts which may or may not be of immediate use. Training, on the other hand, though making use of concepts and principles, is behavioural and involves practice for developing expertise.'

The OXFAM Handbook (1985) states:

'Training should not be confused with or be a substitute for education. Training has narrower, more immediate goals, related to enabling people to acquire specific skills which are usually transferable into work or leisure activities.'

Whilst concurring with aspects of both these definitions, we suggest our own definition:

training is a process which enables people to acquire skills, knowledge and understanding that relate and transfer to their own particular roles and tasks now or in the future

Training is a process which enables people to acquire skills, knowledge and understanding that relate and transfer to their own particular roles and tasks now or in the future.

By focusing on understanding as well as on skills and knowledge, this definition embraces the principles of experiential and adult education already discussed. By including knowledge as well as skills, it avoids the narrowness of the OXFAM definition and indicates the importance of the relationship between theory and practice.

We need to remind ourselves again of the two kinds of knowledge and the two kinds of practice analysed in this paper:

- 'external' knowledge (from books and lectures)
- knowledge created in experiential learning from the analysis of practice
- 'natural' practice drawn from personal and social experience
- 'constructed' practice to give the learner experience of reality (the practicum).

While the most effective learning and training result from a merging of all four aspects, training courses frequently contain only 'external' knowledge (theory) and practicum. To make matters worse, the two are often detached with an imbalance in favour of theory, as in the earlier description of medical training.

The separation of theory and practice in training manifests itself in several ways:

- Training courses are usually constructed in 'blocks' with a period of time (varying with the different professions/levels) spent in colleges or universities followed by a period of practice in the field. Blocks are usually designed to fit in with the programme of the theory teachers and the institution rather than on the basis of good educational principles.

- Theory teachers are usually not the teachers/tutors who actually supervise practice. In some cases the two groups have little or no contact with each other.

- Group sessions for the analysis of practice, though essential, are often not planned or time-tabled in the training programme or are included in an *ad hoc* rather than an integrated way.

The last point is important. Achieving effective integration of theory and practice would require major change to put practice at the centre of the training process. Theory would therefore cease to be a separate part of the process and would be used **when and where required to illuminate practice**. But many trainers are likely to resist such a radical shift. This issue is explored further below.

We conclude this section on theory and practice with a quotation from Faundez (op cit):

> *'To learn well ... calls for not only an intellectual but also a practical effort, thanks to which the abstract – which is part of reality – permits one to penetrate the concrete and vice versa. In this pedagogical (sic) and cultural process, it is necessary to pass from ... 'opinion' to comprehension. This is done through a theoretical and practical process in which the abstract clarifies the concrete and, inversely, allows one to discover theoretical-practical reality and to transform it'.*

Difficulties in experiential learning

We have presented a positive view of experiential learning. But experiential learning has its critics, including some from the field of management training, despite the latter's relatively warm embrace of this approach. Green and Tabor (1978) argue:

> *'despite its promises, experiential learning has a number of difficulties which rob it of its full meaning'.*

They make two main points. As experiential learning is often enjoyable, students frequently view it as a game and therefore fail to reflect on it in the critical way required for effective learning. This is a curiously puritanical argument.

Next, they argue that most students do not have sufficiently developed observation skills to know what to look for in experience. Moreover, experiential learning is often non-integrative and non-programmatic. They state:

> *'All of these problems serve to weaken the reflective observation phase of learning, thereby diminishing students' ability to develop abstract concepts, to relate the course experiences to other concepts, and to generalise to real-life situations'.*

In these arguments Green and Tabor appear to have underestimated the potential of students and the role of the trainer as facilitator. They do not appear to recognise that trainers have a responsibility to help develop the

observation skills of the students and to create opportunities for critical reflection. Trainers also need to construct with students a learning environment which fits both the students' own experience and the training objectives.

The solutions suggested by Green and Tabor to the problems they pose clearly indicate that they are trying to make experiential learning fit traditional behaviourist approaches to ensure predictability. House (1978) agrees with the objective of predictability and argues that:

> *'lack of predictability results in confusion on the part of students and the feeling that they have wasted their time'.*

Many students favour experiential learning, but some remain critical, viewing it with impatience. While they may simply have different learning styles, we should note that these styles are usually the result of traditional teaching.

The existence of different learning styles should not discourage trainers from using experiential learning approaches. Different learning styles only indicate an **emphasis** in that person on a particular way of learning. If trainers seek to discover and understand the 'personal and social history' of the learner, this would include identification of learning styles. It would then be possible to *'construct with them an appropriate learning environment'* (Wilson op cit).

Since most adult learners have been taught to learn by traditional methods, they tend to believe that learning consists of instruction by the teacher, the absorption of knowledge and the ability to recall facts in the examination room

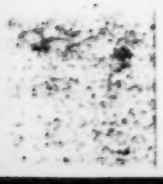
The fact that people are 'taught how to learn' presents difficulties for trainers who want to use experiential learning approaches. Since most adult learners have been taught to learn by traditional methods, they tend to believe that learning consists of instruction by the teacher, the absorption of knowledge and the ability to recall facts in the examination room. Given this view, experiential learning approaches will not constitute 'real' learning.

To be effective, an experiential learning approach to training demands a particular kind of trainer – a facilitator. Therefore, facilitators should also be trained in experiential learning methodology. But the same attitudes identified above in relation to students also apply to the training of trainers. That is why we have addressed these issues in a training pack for trainers.

Chickering (op cit) is clearly aware of other difficulties for trainers:

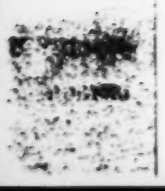
> *'The role of expert may be deeply satisfying. Preparing thoroughly and maintaining strict control may provide security, recognition and a sense of achievement very hard to relinquish. Why should I get to know practitioners and spend time talking about their problems? Why should I encourage a situation in which students may introduce new considerations that simply distract me and the class from the theoretical complexities that are so satisfying and worthwhile? These concrete experiences and practical applications may be well and good and may eventually be necessary – but not now, not for my students, not for me to deal with.'*

A further argument is put by Smith (1988), from the field of management training. He favours the expert lecture on the grounds that this methodology



gives high credibility to training and saves a great deal of time. But experiential learning does not exclude the use of lectures. It permits appropriate introduction of abstract theory when theory can illuminate practice. Experiential learning is working effectively when, in Chickering's words:

> *'... students recognise that words in print (and those from the mouths of experts) are not absolute truths but are instead one person's particular organisation of reality.'*



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3 Experiential learning in action

Training the trainers

We have discussed experiential learning as an effective learning method for all levels of ability, from infant education to post-graduate university education.

We now concentrate on the application of experiential learning principles and practice to the training of trainers, particularly trainers preparing others to work with or care for young children. This includes parents, para-professionals or professionals in development programmes, particularly in developing countries.

Training adults is a major focus of many development programmes. The adult learners described above are all being trained in the care and development of young children. But their training role does not, of course, stop there. Whenever parents and communities are involved in ECCD (Early Childhood Care and Development), those who work directly with children are also expected to be able to work confidently with the adults who surround the child. This entire training pack is, therefore, focused on training adults in an appropriate methodology.

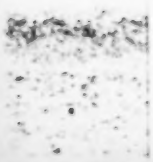
Early childhood development

This training pack has as its content focus, Early Childhood Development. There is an important reason for using active experiential methods in training those who work with young children. Such methods are likely to produce workers who think for themselves, who are creative and imaginative and who have learned the value of interaction in the learning process. In turn, they are more likely to work with young children and families in a way which reflects their training. The result will be children who learn better, because their developmental needs are understood. Their language skills will develop more quickly through improved interaction with caring adults.

crucial interaction is lacking between the adult caregivers and the children

In many developing countries, adults are trained as pre-school teachers with traditional pedagogic methods. The results are predictable. Pre-school classrooms are always arranged with 'corners', each devoted to another aspect of children's development: the art corner, the building corner, the reading corner, etc. Once they have arranged these 'corners', pre-school teachers frequently become passive observers of the children's activities. Crucial interaction is lacking between the adult caregivers and the children.

In the training of these teachers, the emphasis was on the **theory** of child development. Its practical application was dealt with in a way which allowed



no questioning. Trainees have been taught that there is only one way to arrange a classroom. An example from one of the authors of this pack indicates how individual creativity and imagination in the training of pre-school teachers are discouraged:

> *'On one mission to a developing country, I was asked to act as a kind of impromptu external examiner of the work of students completing a pre-school teachers' training course. The trainer was trying hard to ensure the course had a practical component, so each trainee had made toys and learning equipment for the children to use. Every trainee had made exactly the same collection of objects. When asked why, the trainer said that if they all made different things, it would be very difficult to give marks for their efforts.'*

This is a perfect example of behaviourism taken to its limits.

Although trainees in developing countries may have low levels of **formal education**, they often have high levels of creativity and imagination, strong oral traditions and understanding of children's needs. All of these provide an ideal base for training to work with children. These qualities are the very ones which can be drawn on through active experiential training methods. It is both sad and wasteful to ignore these qualities in order to facilitate assessment.

However, development programmes in ECD (Early Childhood Development) are frequently described as offering **alternative** ways of providing care and education for young children. They are therefore in a position to try out new ways of training.

Experts on primary education in developing countries struggle with many problems: the low status and high turnover of teachers, high pupil drop-out rates, poverty, education of the girl child and lack of parental interest in schooling. Linking these problems to the **training** of primary school teachers, some experts are critical of behaviourist and mechanistic approaches. They realise that they lead to mechanistic approaches in the classroom. In a policy paper prepared in 1991 for the Commonwealth Secretariat on the subject of *Approaches to Teacher Education: Initial Teacher Training*, Beatrice Avalos said:

> *'Much of primary school teaching ... remains teacher-centred talking, with mechanistic forms of pupil participation, emphasis on "labelling" and "nominalism", and with little provision of help to children experiencing learning difficulties.'*

She refers in her study to research into methods of teaching in primary schools and their relationship to teacher training in Colombia, Bolivia, Thailand, Papua New Guinea, Sri Lanka and many other countries.

It is much easier to carry out experiments in training as it is part of the non-formal system

Changing the training of primary school teachers is difficult because primary education is bound up with the formal school system. It is much easier to carry out experiments in the training of teachers and workers in early childhood care and development as it is part of the non-formal system. Successful experiments in the training of early childhood workers in the participatory experiential

mode could have great potential influence on the formal system. There are examples in projects supported by the Foundation of teachers in primary schools seeking training from ECD trainers, having recognised the advantages which flow from working in this mode.

Some problems in introducing new training methods

Introducing participatory experiential training methods into the field presents a number of problems. One is the **self perpetuating nature of learning**. In other words, adults have been taught how to learn in the early days of their schooling. This almost certainly means that they were taught in the traditional pedagogic way. When the same methods are used at a later learning stage (for example, when adults are trained to work in an early childhood centre or to become a parent educator), their responses can include anger, withdrawal or passivity.

Much depends on the level of confidence in these adults when entering the training. The level of confidence is predictably lowest in those who have failed or dropped out of the formal system, including many of those in ECD programmes in developing countries.

To cope with this problem, experiential methods have been used in many parent education initiatives which form part of these programmes. These methods have been very successful. Evaluation of these initiatives have found positive results for parents: improved personal confidence, growth of knowledge and understanding, and development of collective approaches to problems.

In looking at experiential methods in training of pre-school teachers, the main problem is one of **credibility**. If these teachers are employed by Ministries of Education, training standards must reach a certain level. That level is determined in relation to existing teacher training programmes. In other words, pre-school teacher training programmes must resemble primary teacher training programmes as much as possible, with an emphasis on theory to provide academic credibility. Even when pre-school teachers are employed by communities/parents, academic credibility is sought to ensure status.

The credibility problem has another aspect. Many projects in both developed and developing countries attempt to increase the status and financial rewards of early childhood workers by obtaining accreditation from local universities. In negotiating with universities to gain recognition (Certificates and Diplomas) for aspects of Child Care/ECD/EC Education, project organisers encounter problems which are central to this discussion.

Even when negotiations succeed and an accredited course is set up, often the rate of student drop-out is high in the first year(s). This appears to correlate with the strong theoretical focus of the early parts of many university approved courses, which are frequently taught in the university itself. This focus may discourage experienced workers in the early childhood field. They are being

introduced to the theoretical underpinning of the work that many have been involved in for years, **without reference to that experience**. This often makes adult learners feel that they have arrived on the course knowing nothing. Naturally this can result in a dramatic drop in their self-confidence.

Large numbers of children present another challenge to participatory methods. In many countries there are large numbers of children in centres, schools and day care situations. If workers are trained in a methodology which emphasises the understanding of individual backgrounds and learning needs and the importance of interaction, how can they effectively use this methodology in a class of 80?

In order for experiential learning methods to work well, the cycle of 'being taught to learn' must be broken

A final problem – but a major opportunity – is concerned with the **training of trainers**. In order for experiential learning methods to work well, the cycle of 'being taught to learn' must be broken. Ideally this would occur by focusing on the **initial training level**. When those trained in experiential methods move through the levels of the system and eventually become a new generation of trainers themselves, the cycle may be broken.

This pack is an attempt to begin this breakthrough by targeting the third tier, the training of trainers. It also considers in-service training in the non-formal system, such as the training of para-professional parent educators. The potential for breaking the cycle here seems good.

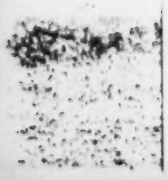
● Relating methodology to current practice

The problems outlined above are real and daunting. Therefore, trainers must be sensitive to all the adverse attitudes. Trainers in the early childhood field, who will be training those who train both professionals and para-professionals to work directly with children, parents and communities, **should not attempt too much too soon**. Trainers should set a realistic pace for introducing experiential methods.

as a trainer you must first decide whether to take on the role of facilitator rather than traditional teacher

For example, as a trainer you must first decide whether to take on the role of facilitator rather than traditional teacher. The role of traditional teacher or trainer allows you to keep a certain distance from your trainees and gives you a clear structure to which you can work with satisfaction. It also provides you with the status of expert. If you are satisfied that your present methods of training result in a good pass rate for your trainees in their final tests **and also** result in children receiving much more than custodial care – then you may see no reason to change your methods.

If, however, you feel less satisfied, then you may wish to try out some of the ideas in Part 2 of this training pack. These include activities which encourage active involvement by trainees in the content area of child development. They draw on trainees' own experience. They should help trainers and trainees to get the most benefit from the practicum, and they relate to the theory which is provided in other parts of the pack.



There is an important caveat. The activities are designed to be used by a trainer who is prepared to be a facilitator. This means you should see the self-development of the trainee as one of the main training objectives. This would be in terms of:

- building up self-confidence
- encouraging initiative and creativity rather than conformity
- posing questions rather than giving answers
- giving appropriate support in the practice part of the training.

You may want to go beyond these activities. You could even try to design your own training course using experiential methods. The following points may help you do this.

1. **Make a decision that practice will be the focus of your training**. Start with the practice and then build your theory around it. The theory will emerge from practice. Practice includes:

   - trainees' existing practice in relating to and understanding young children in their everyday lives ('natural' practice);

   - the practical placement that they will undertake as part of the course, or their present practice as a worker in an EC Centre, a child minder, a village health worker, or a trainer of any of these ('constructed' practice).

   Your task as a trainer will be to use both these forms of practice in the development of the trainee.

2. **Begin with a diagnostic approach**. Find out as much as possible about the individual trainee.

   - Talk to each of them about their experiences as mothers, sisters and as children themselves. You can show you value these experiences by drawing on them during the training.

   - If they are already workers in ECD, discuss their experiences and discover what they see as their strengths.

   - Discuss as well, the weaknesses they want to change into strengths.

   - Consider with them the possibility of using their present work situation to set up a supervised and supported practicum.

   - Make early group sessions an opportunity to get to know each other, to share expectations and self-doubt, to share experience and to build self-confidence and trust in other group members as well as the facilitator.

   - Plan activities which develop observation skills.

3. **Avoid beginning courses with theory.** Theory frequently serves to make trainees feel ignorant and thus reduces confidence. Instead, introduce it as the need and opportunity arises. Group sessions for analysis and reflection on practice provide an ideal context for bringing in relevant theory. Practice supervision and support provide another setting to bring in theory.

   If you are not confident enough about your methods to do this, avoid blocks of theory followed by blocks of practice. Instead, either have a block of practice followed by a block of theory or find some way to intersperse the two.

4. **Use analysis of practice as the basis of your group training sessions.** Discuss in the group what has happened in practice and think about how things might have been done differently. Were there alternatives? Discuss what trainees have observed about individual children or what they have learned in seeing how other adults relate to children.

   If you do not feel confident enough to put these topics into a theoretical context, you could arrange to have a group session in which relevant theory is introduced. The group can discuss the theory and whether or not it has illuminated their practice.

5. **Encourage peer support.** As the training proceeds, greater trust among trainees should help them to reflect on practice with each other. Promote sharing of ideas and experience in group sessions. If problems arise in practice, the trainees themselves can begin to support each other with ideas and encouragement. They can also confront and challenge each other about their work and practice.

In one developing country, guidelines were recently being developed for trainers who would be involved in training facilitators to work in the parent education field. As background to this, some research had been done on local child rearing practices. These had been classed as positive, negative and neutral practices. In guidelines relating to the development of babies 0-3 months, all these practices were included. However, in the methodology section, it was suggested that all the practices should form the basis of discussion with the facilitators in training.

In this way, instead of the facilitator, and ultimately the parent, being told that a particular practice was wrong – because it was harmful to the baby – the point could be raised in the form of questions. For example, facilitators would ask why some mothers try to stretch their babies' legs. They know the reason: the mothers are afraid that the baby's legs will not grow straight since babies frequently draw their legs up to the 'womb' position. The mother's answer could lead to a discussion in which the facilitator could explain that the baby's movements and development are natural and that the body and limbs are fragile.

Positive practices should always be commented on and even used as starting points for discussion of more negative practices. For example, some mothers in the same culture as above, put fine gauze over the faces of their babies to protect them from the sun. Yet, when the children are a little older, the same mothers are so protective of them that they keep them indoors and the health of the children suffers from lack of sunlight. Here a positive practice can be linked with a negative practice to bring out the learning points.

6. **Spend time with trainees in their practice situation.** Although distances in developing countries may be an obstacle, remember that one day working alongside a trainee in her practice situation may be worth many days of theory. Try always to comment and build on the positive aspects of the trainee's work. If there are negative aspects, suggest alternative ways of working rather than dwelling on the negative.

7. **Be sensitive in your approach to cultural and traditional practices.** For example, in relation to child development, be clear which traditional practices have a positive effect on the child, which have a negative effect and which could be considered neutral. These issues will come up if you work in an experiential way. That is because the training is concerned not only with knowledge, understanding and skills development but with values and attitudes as well.

   If cultural practices are not dealt with sensitively, there will be a resistance to learning on the part of those whose culture seems to be threatened or attacked.

8. **Develop your own materials and activities** for participatory learning. Use training materials, like this pack, to get ideas on how to develop culturally relevant materials. Do not work mechanically through the listed activities – try to adapt them to your conditions.

   For example photographs, pictures and videos serve as effective learning tools since they raise discussion of child development issues. They will be doubly effective if the photographs are taken/the pictures drawn/the videos made in the community where the training is taking place. Visual materials are, of course, particularly effective in training those with literacy problems.

   The same is true of role play and simulation. These provide two of the best ways of conveying points in any situation. In cultures with strong oral traditions, these techniques are especially effective and culturally appropriate.

9. **Review the way you assess/examine your students' learning.** Exactly what are you assessing? If you are using written examinations, do the questions merely test the trainee's ability to memorise facts? Is this simply encouraging rote learning? If you are using experiential participatory methods which encourage trainees to question and to be creative and imaginative, then any assessment process will need to find ways of allowing them to exercise these qualities.

   For example, you might ask them specifically to draw on their practice experience in answering questions about child development. This once more underlines the importance of the link between theory and practice.

Extensions of these points and additional ideas and descriptions of different participatory training techniques will be found in other parts of this training pack.

Tackling the problems

The credibility problem raised earlier has been side-stepped. Instead, we have concentrated on the informal, experiential nature of training in ECD projects, where experiential methods are most likely to be tried out. There is still a need to convince universities, colleges and ministries that participatory experiential learning approaches work, if accreditation and appropriate monetary reward are to be sought. Above all, evaluation of the effects by these methods and some comparison with traditional pedagogic training methods are needed.

Above all, evaluation of the effects by these methods and some comparison with traditional pedagogic training methods are needed

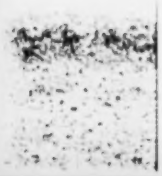
However, while awaiting the results of any evaluation, we can draw attention to what we see as our successes. This could be, for example, in terms of observed improved development of children/parents who are the ultimate recipients of the effects of training programmes. We can also start to include in our training primary teachers and health workers who have expressed interest in new ways of working with children and families.

Coping with large numbers. Let us return to those teachers who have been trained in a way which encourages interaction with children – but who then have to cope with pre-school classes of 80 children. It would be too easy to say that a pre-school teacher who is committed to both the concept and the children, will manage somehow. In fact, there are pre-school teachers in developing countries who have warm and personal relationships with their young pupils, in spite of having to cope with large classes. But they need help – not only ideas but supportive personnel. In some developing countries, teachers with pre-school children are crammed into tiny classrooms while outside there is plenty of space. Often the mothers are nearby, doing minor tasks or waiting for their children. Why not involve them in the classroom?

Partnership with parents. We said earlier that in development programmes we are involved in adult education, preparing adults to work not only with young children but with parents and community members. In programmes centred on parent education, the approaches advocated in this pack are the only ones that will help and support parents in improving their parenting. In the most effective centre-based programmes, parent education is also a feature. But an additional step could be taken by these programmes in involving parents in the work of the centre itself. Experiential/participatory training for ECD workers in whatever the setting, should include methods of, and practice in working with parents. In this way parents can continue to be the educators of their own children and partners with those who work with children.

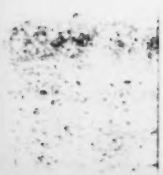
Conclusion

This part of the training pack has moved from a rationale for experiential learning to a discussion of training in general. Finally we have looked at training in early childhood development, particularly in developing countries.



More detailed information on 'Delivering Effective Training' and 'Resources' are contained in other parts of this pack.

This part of the pack, in fact the pack as a whole, is based on a great deal of experience in using experiential participatory learning methods over many years. If it encourages readers to reflect and assess the methods they currently use and to try out the ideas, it will have succeeded.



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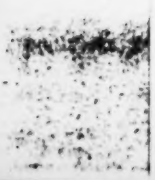

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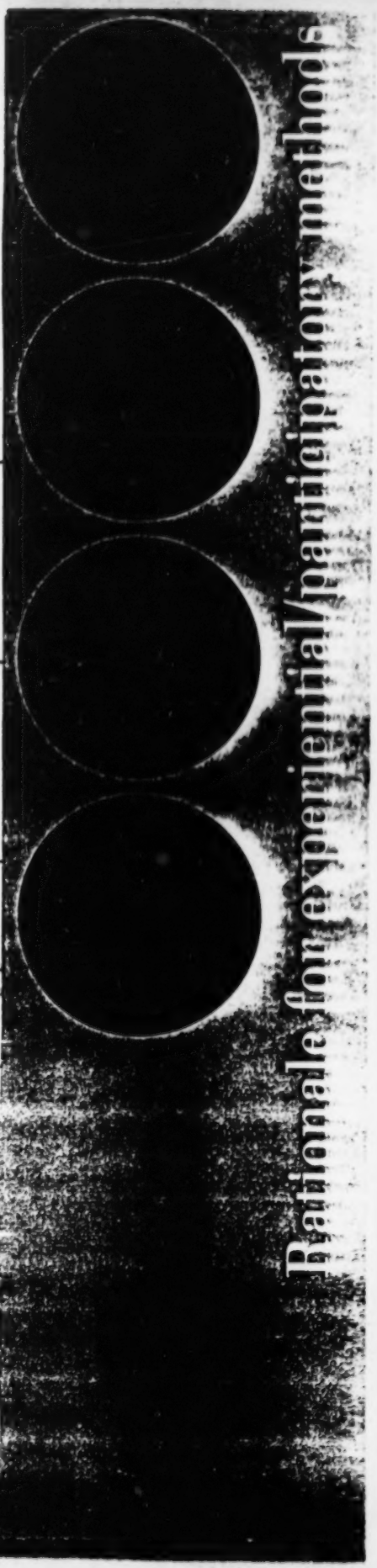

1 Introduction to the training pack

2 Delivering effective training
The practical focus of the pack

3 Guide to the development of the young child
Reference materials: comprehensive information on the development of babies and young children particularly their psycho-social development

4 Rationale for experiential/ participatory methods
Reference materials: the rationale for advocating these methods

5 Resource list
An annotated list of selected training materials

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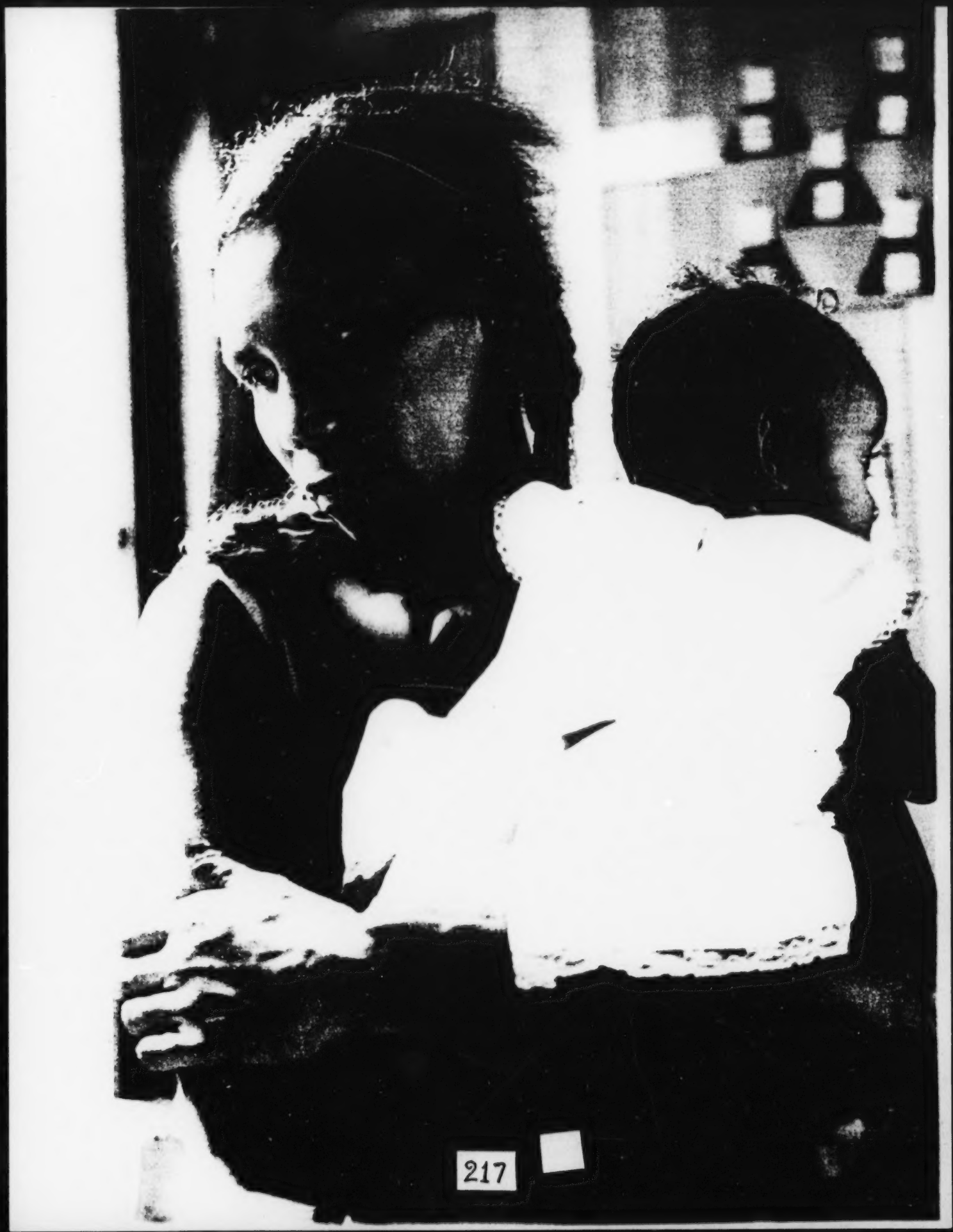
Resource list



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USING THIS TRAINING PACK

This Training Pack is intended to persuade, not to prescribe. We want readers and users to take from the Pack whatever fits comfortably with themselves and their work, to use the suggestions if and when it suits them, and to be creative in adapting the ideas to their own circumstances and inventing new ones.

The Pack can be used by individual trainers or by groups of trainers. It will probably be most effective if a group of trainers meet together to discuss issues raised in the Pack and try out the activities. It can also be used by individual trainers as a selflearning pack.

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Introduction

This part of the training pack provides additional sources of information to assist trainers in developing their training methods.

The resources listed are books and manuals. While nearly all are in English, versions in other languages are obtainable in some cases. We have indicated this availability wherever known. While most of the materials have been produced in the United States and the United Kingdom, the list also includes materials from Africa, Asia, Australia, the Caribbean and Latin America.

Many of the materials focus on community development, health issues, and training activities and skills, all of which are frequently important components of the work of early childhood workers and which, in any case, can be adapted to fit with aspects of the ECD curriculum. We have also included a number of sources from the very extensive literature on active training methods aimed at the corporate business training world. Many of these are very good and should not be ignored by those coming from the worlds of academia, social welfare, or education.

Many of the materials contain exercises, case-studies, and games. Others include fully designed training courses with the documentation for each session of the course. While it is possible for a trainer to create a total course using the materials in this list, we do not recommend this.

Even if the materials have been produced for use in the same region of the country for a similar project, **every trainer needs to adapt the materials to local circumstances, the needs and make-up of trainees and projects, and the extent to which trainers are familiar and comfortable with the methods to be employed.**

It is not expected that all the materials listed will be suitable for everyone who reads this training pack. For example, material with a clear Christian bias would be unsuitable for many groups, as would a book of exercises requiring a group to watch a particular TV advert or programme. We have, however, included such sources if they contain material we consider valuable for some groups or other important information.

Availability and cost

To the best of our knowledge, all of the materials listed are available at the time of writing, May 1994. In some cases, the publishers and distributors will have local offices where it might be possible to examine recommended materials before purchase. Readers should check on local distribution.

It is also possible that local libraries and universities and local offices of international agencies such as UNICEF and UNESCO might have copies for borrowing. Other possible sources would include local offices of the United States Information Service, the British Council, and the local offices of international aid agencies.

Please let us know about the resources you use and find useful. Tell us about the ones developed locally, the ones on this list and the others you discover over time. We hope in the future to be able to share your experience with colleagues across the world.

We have not listed in this resource list the very many publications of UNESCO and UNICEF on training, community development, health, education and early childhood development. **These publications are available from regional and local offices and are available in many languages**. In case of difficulty finding your local office, write to:

UNESCO
7, place de Fontenoy, 75352 Paris 07 SP, France

and to:

UNICEF
3 United Nations Plaza, New York, NY 10017, USA

To assist readers, we have indicated prices, where known, of listed materials. Prices are shown in either US Dollars or Pounds Sterling. We must warn readers that prices are subject to change and the cost in local currencies will vary.

As many of the materials are expensive, we hope that the price information will help organisations to estimate their budgets. In calculating cost, organisations should allow for postage costs. These can often be relatively high for single copies.

In order to help readers, we have identified three major distributors. As they maintain among their stocks many of the recommended materials, this enables organisations to order a number of different items from the same source and pay in a single transaction. The three distributors are:

Intermediate Technology Publications (ITDG)
103-105 Southampton Row
London WC1B 4HH, UK.
Tel: (44) 171-436 9761 Fax: (44) 171-436 2013

PACT Publications
777 United Nations Plaza

New York
NY 10017, USA.
Tel: (212) 697-6222 Fax: (212) 692-9748

Pba Training Service
2 Paul Street
London EC2A 4JH, UK
Tel: (44) 171-375 3775 Fax: (44) 171-375 3776

In the listings below, the initials ITDG, PACT and Pba indicate availability from these distributors as well as from the publishers.

In addition, at certain points in the following pages other major publishers of training materials will be indicated. Projects and trainers wishing to follow up certain areas may wish to obtain catalogues from these sources.

Training manuals – community development

The following have been designed to be applicable for a variety of audiences in a number of countries. Generally they have been developed and tested for and are targeted to community development training in less developed countries.

Catherine Crone and Carman St John Hunter, compilers (1980), **From the Field: Tested Participatory Activities for Trainers**, *World Education, New York, USA. Available from PACT. Price $15.50. 148 pages, paperbound, 215 x 280mm (8.5" x 11").*

An excellent manual comprising many activities field tested across a number of countries and cultures. The main content consists of activities (lasting between 45 minutes and two hours) divided into sections on 'Becoming a Learning Group'; 'Discovering Needs'; 'Choosing Appropriate Methods and Materials'; and 'Assessing Progress and Results'. A five-day field test learning experience is also outlined and this might provide a guide for trainers wishing to design a similar exercise for trainees.

Jane Vella (1989), **Learning to Teach: Training of Trainers for Community Development**, *Save the Children, PO Box 950, Westport, CT 06881, USA and OEF International, Washington DC. Available from PACT. (Also Spanish edition). Price $15.00. 76 pages, paperbound, 280 x 215mm (landscape).*

This is a manual for a Training of Trainers Workshop aimed at field staff of Save the Children and other development agencies working in various parts of the world. It outlines a ten-day programme broken down into 25 sessions and is best used as an integrated whole. The manual can also be used for individual sessions.

It is clearly written and would serve as a very good guide and stimulus for the design and organisation of a training the trainers course, especially for trainers who already have a wide experience of participatory experiential methods. Less experienced trainers would probably need more material on methods such as group work, facilitation, etc.

Lyra Srinivasan (1990), **Tools for Community Participation: A Manual for Training Teachers in Participatory Techniques,** *PROWWESS/UNDP, New York. Distributed by PACT. Price $17.95. (Also available from ITDG, Price £15.00). Versions in French and Spanish available from PACT. 179 pages, paperbound, 215 x 280mm.*

The first part of the manual looks at organising training programmes and workshops. The larger second part describes 39 different Participatory Training Activities with full details as to how to plan sessions. There are a number of very good illustrations which can be used in training.

This excellent manual grew out of the United Nations Development Programme (UNDP). The PROWWESS programme, based in UNDP, stands for 'Promotion of the Role of Women in Water and Environmental Sanitation Services'. The manual focuses on training for women as the main collectors/users of water and guardians of household hygiene and family health. While this manual is aimed at developing countries and water supply and hygiene issues, it will be of use to trainers in almost any context as its ideas can be adapted to local circumstances. A video costing $32.00 ($45.95 with manual) is available from PACT. The video is not recommended.

Ann Hope, Sally Timmel and Chris Hodzi (1992), **Training for Transformation: A Handbook for Community Workers**, *Mamba Press, PO Box 729, Gweru, Zimbabwe. Available from ITDG. price £19.95. (Also available from PACT, price $40.00) 460 pages (in 3 volumes), paperbound, 210 x 295mm.*

Three volumes, excellently and wittily illustrated. The handbook is based on the Delta training programmes carried out over a number of years in Zimbabwe and other parts of Africa.

Five themes inform this work. They are: the work of Paolo Freire on critical awareness; human relations training in group work; organisational development; social analysis; and the Christian concept of transformation. This is a very good handbook but would be unsuitable for individuals and groups who are not committed Christians.

Suzanne Kindervatter (1987), **Women Working Together for Personal, Economic and Community Development**, *OEF International, 1815 H Street N.W., 11th Floor, Washington D.C. 20006, USA, or from Women, Inc., 777 United Nations Plaza, New York, NY 10017, USA, price $13.50. (French and Spanish versions available. English version also available from ITDG, price £10.00). 104 pages, paperbound, 195 x 305mm.*

This book is based around full programmes for 18 two-hour training sessions for groups of between 10 and 20 women. The materials are mainly based on initial work in Costa Rica, Honduras and Thailand. There is a short introduction and all sessions are very well documented and include illustrations for use or adaptation. Much of the material would be ideally suited for weekly sessions run by a less experienced trainer as a preparatory induction to more specific work on ECD.

The following community development training manuals have been developed in one or two countries.

Stanley Gajanayake and Jaya Gajanayake (1993), **Community Empowerment: A Participatory Training Manual on Community Project Development**, *PACT Inc., price $25.00. 160 pages, paperbound, 215 x 280mm.*

This manual's underlying theme is people's participation. It is intended as a tool for training community development practitioners and personnel working in people centred projects. The methods described have been field tested in Sri Lanka and the authors state they have also been used in the USA with community organisations.

The manual has a short introduction followed by 25 sessions planned to last from one and a half hours to half a day. It is sequenced in three phases starting with Project Identification and Planning, followed by Implementation and Evaluation. The first phase is divided into five modules. If there is any criticism of this excellent manual, it is that not enough attention is paid to implementation and evaluation compared to the first phase. However, this is easy to read, with clear instructions and good illustrations.

Siapha Kamara and Aloysius Denkabe (1993), **A Handbook on Participatory Approach to Training. Vol I - Project Planning, Management and Animation. Vol II - Gender in Development**. *Freedom Publications, c/o PO Box 601, Accra New Town, Ghana. (Also available from PACT) 35 pages (both volumes), paperbound, 255 x 185mm (landscape).*

This handbook is based on experience of training programmes for NGO personnel in Northern Ghana. Although very concise, the two volumes cover most of the main areas of concern in participatory training. While the main text is clear, good eyesight will be needed for some of the small print materials.

Pat Ellis (1983), **Getting the Community into the Act**, *Women and Development Unit (WAND), Extra Mural Department, University of West Indies, Barbados. About 150 pages, arranged in loose-leaf binder, 210 x 295mm.*

Subtitled '72 Participatory Activities for Field Workers and Trainers', this manual includes activities which have been used with a wide variety of groups in the English speaking Caribbean. The manual is divided into two parts

(Understanding People and Involving the Community). The first part is further divided into sections on 'Getting Acquainted and Clarifying Expectations', 'Personal Development', 'Attitudes', 'Communications', and 'Working with Groups'. The second part covers 'Community Development', 'Needs Assessment', and 'Programme Planning and Evaluation'. Each section contains between four and ten activities. These range in time from five minutes to three hours.

An easy to use manual with many activities that allow the less experienced trainer to experiment with new methods. Some excellent 'Trainer's Reflections' to help facilitators in some of the exercises.

Training of Trainers: A Manual for Participatory Training Methodology in Development, *(1987), Society for Participatory Research in Asia, 42, Tughlakabad Institutional Area, New Delhi-62, India. Fax 91-11-6442728. Price US $25. 152 pages, wirebound for easy photocopying, 210 x 295mm.*

Detailed manual divided into seven sections, some of which can be used independently. Each section includes theoretical inputs, practical guidelines and examples of methods used. The sections are 'Participatory Training Methodology: Context and Principles', 'Role of Trainer in Participatory Training', 'Designing a Training Programme', 'Small Group', 'Learning-Training Methods', 'Evaluation and Follow-Up', and 'Additional Resources'.

This manual covers a lot of ground with some very detailed examples of process. For example, it provides four models of small group facilitation with dialogue. It also gives six examples of illustrative training designs ranging from short two-day courses to a three-phase training the trainers course lasting 30 days. The material is based on work in all parts of India. As the print in this book is very small, it is not suitable for anyone with sight problems.

Participatory Training for Adult Educators *(1987), Society for Participatory Research in Asia, 42, Tughlakabad Institutional Area, New Delhi-62, India. Fax 91-11-6442728. Price US $8.00. 106 pages, paperbound, 160 x 230mm.*

This book consists mainly of case studies of five training courses for adults held in different parts of India. The studies include the organisational position of trainees, the development of the training course, the training process, follow up and the factors that facilitate and hamper learning. Two of the courses specifically focus on women working in community development.

This would be a very useful supplement for trainers wishing to examine the way that their training has evolved. It would also raise awareness of some of the complexity involved in designing and running training programmes.

Penny Henderson (1989), **Promoting Active Learning**, *National Extension College, 18, Brooklands Avenue, Cambridge CB2 2HN, UK. Price £34.95. (Also available from Pba). 125 pages, wire binding for ease of photocopying, 210 x 295mm.*

A very clear, well organised book aimed at people who want to know more about how adults learn. The first third of the book deals with issues of providing learning opportunities for adults, ideas about setting up sessions and the skills that tutors need. The rest of the book examines and illustrates methods and defines their aims, advantages and disadvantages. Each section provides a good range of references.

This is one of the best texts on participatory learning aimed at a British audience. While it should travel well to other industrialised countries, the examples may be less suitable in developing countries.

Setting up a Community Work Skills Course *(1992), Federation of Community Work Training Groups, 356 Glossop Road, Sheffield S10 2HW, UK. Price £9.00. 94 pages, wirebound for easy photocopying, 210 x 295mm.*

A very clearly written guide aimed at local community groups in the UK. Good on values and process with a session by session guide. The examples are imaginative and could provide many ideas for adaptation for use in other cultures. Emphasis on how to develop skills with good notes for trainers.

Training and How to Enjoy It: A Community Groups Training Pack *(1989), Community Education Training Unit (CETU), Arden Road, Halifax, HX1 3AJ, UK. Price £9.95. 108 pages, designed for easy photocopying, 215 x 280mm.*

This collection of training exercises was devised by people working in and for community groups. It is an extremely easy read, with some very cheerful illustrations. There is a short introduction on setting up training sessions with about 30 exercises divided into sections on 'Groups and Meetings', 'Publicity and Campaigning', 'Equal Opportunities', 'Finance and Funding' and 'Planning and Problem Solving'.

This pack is aimed at those working in community development, mainly in an urban context. Details contained in the handouts of a number of exercises would need to be amended for use outside the UK. It should generate ideas for training.

The two following texts are based on work in many countries but aimed at training US Peace Corps volunteers.

Helen Fox (1989), **Nonformal Education Manual**, *Manual M0042, Peace Corps.*
Helen Fox, et al (1991), **Nonformal Education Training Module**, *Manual T0064, Peace Corps.*

These two Peace Corps manuals contain some very good and original material. Both are substantial (160-170 pages), with illustrations and diagrams. The manual is more discursive, covering different topics and it is well indexed. The module covers in considerable detail a training course of ten three hour sessions. Although the target audience of both these publications is very different from that of many trainers, the manuals should be of value to them.

The above manuals are published by the Peace Corps of the United States. They are available free to non-profit organisations working in development from: ICE (Information Collection and Exchange), Peace Corps, 1990 K Street NW, Washington DC 20526, USA.

Other organisations should write to: Educational Resources Information Clearinghouse (ERIC), Document Reproduction Service, EDR/CBIS Federal, 7240 Fullerton Road, Suite 110, Springfield, Virginia 22153-2852, USA.

Training materials – children and young people

Reference materials on the content of Early Childhood Development can be found at the end of Part 3: 'Guide to the development of the young child'.

Publications which promote discussion and information sharing are of particular importance for active participatory training. Some of the best examples are the publications of the Child-to-Child Trust.

Child-to-Child is an approach to Health Education and Primary Health Care involving a network of health and education workers in over 60 countries. Central to Child-to-Child philosophy is the belief that older children are major carers of the young and that their education and development is an essential part of any community health development programme.

All Child-to-Child publications are available from TALC (Teaching Aids at Low Cost), PO Box 49, St Albans, Herts. AL1 4AX, UK. Child-to-Child materials are available in a number of major languages.

Three Child-to-Child publications are listed below.

Child-to-Child Activity Sheets. *Price £2.00. 31 activity sheets, each four to eight sheets, in paper folder, 210 x 295mm.*

Activity sheets covering 'Child Growth and Development', 'Nutrition', 'Personal and Community Hygiene', 'Safety', 'Recognising and Helping the Disabled', and 'Prevention and Cure of Disease'. All sheets are illustrated and recommend activities.

Grazyna Bonati and Hugh Hawes (ed) (1992), **Child-to-Child: A Resource Book**. *Price £5.00. 250 pages, paperbound, 210 x 295mm.*

A comprehensive volume that includes all the activity sheets listed above. In addition it has sections on 'Approaches to Learning and Teaching', 'Doing It Better – A Simple Guide to Evaluation', and 'How to Run a Workshop and Similar Occasions'.

Hugh Hawes and Christine Scotchmer (ed) (1993), **Children for Health**, *Child-to-Child in association with UNICEF. Price £2.00. (Also available from UNICEF) 183 pages, paperback, 160 x 230mm.*

Detailed volume dealing with all aspects of health. Each section concludes with evaluation questions for children, teachers and health workers.

Many of the community development training manuals (pages 3-7) also include material on the care of young children. The books listed below are more specific. The first three are training manuals, while the others are useful examples of resources or methods.

The Key To Quality: A Guide and Resource Materials for Training Childminders, *(1993), National Childminding Association, 8 Masons Hill, Bromley, Kent BR2 9EY, UK. Price £70 for non-members (£35 for NCMA members). 345 pages, 210 x 295mm size, in looseleaf binder 310 x 285mm.*

A very comprehensive manual detailing all aspects of the training of childminders in Britain. Part of the implicit purpose of this manual and its associated training programme is to raise the status of childminders.

The manual is clearly divided, with cross-referencing, into 21 sections. Each section contains notes for tutors; aims and objectives of the section, as well as follow-on courses and workshops; information about resources for tutors; exercises for use in course sessions; and handouts for course members. Each section also includes 'How the topic links to NVQs' – a new type of qualification (National Vocational Qualification) which recognises people's skills, based on national standards. This section will not be relevant to readers in other countries unless they are interested in the detail and method of setting up similar qualifications in their region or country.

This is an excellent, though expensive, manual which might be useful for major regional and national centres of training.

Naomi Richman (1993), **Communicating with Children: Helping Children in Distress**, *Save The Children Fund, 17 Grove Lane, London SE5 8RD, UK. Price £3.95 plus 15% postage and package. 106 pages, paperbound, 150 x 210mm.*

A specialised manual for working with children who have experienced conflict and emergency situations. It is based on work in Mozambique with children

affected by war. These children may have been separated from relatives or have witnessed violence and death, including that of their own families.

Jane Vella and Valerie Uccellani (1994), **Learning to Listen to Mothers: A Trainer's Manual**. *Nutrition Communication Project, Academy for Educational Project, 1255 23rd Street, N.W., Washington, DC 20037, USA. (Available from PACT) 79 pages and Reference Section, paperbound, 215 x 280mm.*

This manual is aimed at improving communication skills for nutrition and growth promotion, specifically to train the field supervisors of Growth Monitoring and Promotion (GMP) programmes. They in turn are expected to train the community health workers. The manual has been field tested in Bolivia, Honduras, India, Indonesia and Mali. The manual covers a two-day workshop divided into six sessions. It emphasises that workers need more than the scientific knowledge of growth and nutrition and must also learn the art of effective, sensitive two-way communication with mothers.

Rajalakshmi Muralidharan, Sangeeta Tolani and Sangita Jain (1991), **Child-to-Child: A Manual for Teachers**. *National Council of Education Research and Training, Department of Preschool and Elementary Education, Sri Aurobindo Marg, New Delhi-110 016, India. 64 pages, 230 x 185mm, paperbound.*

Easy to follow manual that goes through the steps in setting up a child-to-child programme in an Indian primary school. Useful material for trainers setting up similar programmes and noting similarities and differences. A number of good illustrations.

Nutritious Food for Young Children. *(undated), English language versions available from World Neighbours, 4127 NW 122 Street, Oklahoma City, OK 73120-8869, USA or from PACT. Indonesian language versions from Studio Driya Media, Jl. Makmur 16, Cipaganti, Bandung, West Java 40161, Indonesia. 44 pages, paperbound, 160 x 205mm.*

A very well illustrated simple guide to nutritious food for young children up to the age of five. Developed for community development training programmes in rural Indonesia and a good example of the kind of material that can be produced, especially in the use of illustrations.

Many excellent examples of early childhood training materials have been produced by projects in languages other than English. One project which offers a quantity of high quality material is *Centro de Investigacion y Desarrollo de la Educacion* (CIDE) in Chile. CIDE has produced a number of distinctive colourful folders on different aspects of early childhood development. The folders contain instructions for the trainer and sets of instructions for groups with any necessary posters or materials. All this is clearly and attractively presented.

A total of eight folders address topics like play, dealing with aggressive behaviour, communication, etc. All the material is in Spanish. For details of availability and cost, contact CIDE, Erasmo Escala 1825, Santiago, Chile.

Training activities and games

A number of books and manuals provide useful collections of activities, exercises and games for all types of learning and skill development. The following is only a selection. As most of these have been developed for the business environment and are often culturally specific, trainers will have to select and adapt.

The Encyclopedia of Icebreakers *(1983), Pfeiffer & Company, 8517 Production Avenue, San Diego, CA 92121, USA. Price $79.95. (Also available from Pba) 417 pages, looseleaf in hard covers, 222 x 254mm.*

About 150 games and exercises. Grouped as 'Energizers and Tension Reducers'; 'Feedback and Disclosure'; 'Games and Brainteasers'; 'Getting Acquainted'; 'Openers and Warm-ups'; and 'Professional Topics'. Activities are described on separate pages along with a 'Summary'; 'Training Application' (time required, group size, space and materials required); 'Trainer Administration' (how to run the activity); 'Variations'; and 'Trainer's Notes' (a blank space for the trainer to note how activity went for future reference).

Probably the best of the recommended sources on icebreakers but expensive.

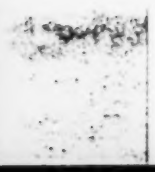
J William Pfeiffer (1989), **The Encyclopedia of Group Activities**. *Pfeiffer & Company. Price $99.95. (Also available from Pba) 431 pages, looseleaf in hard covers, 222 x 254mm.*

Probably the single most comprehensive source of group activities. 150 exercises divided into sections on 'Personal Awareness'; 'Values Clarification'; 'Communication'; 'Group Process'; 'Feedback'; and a 'Miscellaneous' section. All activities are described on separate pages with clear instructions and details of materials required.

Mel Silberman (1992), **20 Active Training Programs**. *Volume I, Pfeiffer & Company. Price $149.00. (Also available from Pba) 428 pages, looseleaf in hard covers.*

Well organised volume containing 20 training programmes for day long events designed for use in the United States. Each programme is clearly described with full timetable, resources required, and forms for use in the training session. A knowledge of US society would be necessary to make full use of this book.

Note: Pfeiffer & Company are a major source of high quality texts on active training methods and group work. Prices tend to be higher than average but they are considered leaders in the field. A detailed free catalogue is available. All publications are also available from Pba



Ken Jones (1993), **Imaginative Events for Trainers: A Trainer's Sourcebook of Games, Simulations and Role-Play Exercises**, *McGraw-Hill, 1221 Avenue of the Americas, New York, NY 10020, USA. Price $24.95. 336 pages, paperback.*

A good concise introduction. The volume contains 48 activities focusing on skill enhancement, creativity, innovation, and working co-operatively. The writing is clear with good briefings, description of process and all necessary handouts. This manual contains a number of activities with hidden agendas. To fully use this book, the reader would need a knowledge of urban society and Western values.

Andy Kirby (1992), **Games for Trainers, Volumes 1 and 2**, *Gower Publishing, Gower House, Croft Road, Aldershot, Hampshire GU11 3HR, UK. Price £29.50 each volume, £49.50 both volumes. (Also available from Pba) 171 pages and 173 pages, hardback.*

Two volumes with 75 games in each. Games range from simple icebreakers, energisers, and attention switchers to more substantial games around skills and communication. While there is some very good material here, a number of the games are very culture bound or too oriented to a business environment.

Gary Kroehnert (1992), **100 Training Games**, *McGraw-Hill Book Company Australia Pty Limited, 4 Barcoo Street, Roseville, NSW 2069, Australia. (Also available from McGraw-Hill, 1221 Avenue of the Americas, New York, NY 10020, USA. Price $21.95.) 176 pages, paperback, 210 x 280mm.*

Well presented volume of 100 training games. A very useful table of all the games designates the training purposes of each game. A number of games demonstrate the process of learning.

Two specific books which are more focused in purpose:

Philip Burnard (1992), **Interpersonal Skills Training: A Sourcebook of Activities for Trainers**, *Kogan Page Limited, 120 Pentonville Road, London N1 9JN, UK. Price £45.00. (Also available from Pba) 358 pages, paperback, 170 x 220mm.*

The first part of this book is a discussion of interpersonal skills training with some illustrative examples. It is written in a refreshingly jargon-free tone for a field dominated by jargon. The main part of the book is devoted to describing 110 activities grouped in sections including icebreakers, exploring feelings, evaluation, counselling and facilitation skills. With adaptation, most of these activities can be modified to local need. Note that interpersonal skills materials will probably need extra care in modification from one culture to another.

Glenn M Parker and Richard P Kropp (1992), **Team Building: A Sourcebook of Activities for Trainers**, *Kogan Page, London and HTD Press, Amherst, Massachusetts, USA. Price £40.00. (Also available from Pba) 202 pages, paperback, 170 x 220mm.*

In a brief introduction the authors differentiate between types of teams and the use of activities for team training and team building. This book is mainly directed towards the business environment in the US/UK. As 50 different activities are included, the book could be of selective use for those concerned with team training.

Evaluation

The following texts describe evaluation methods or training courses in evaluation methods which reflect the philosophy of this Pack.

Joachim Theis and Heather M Grady (1991), **Participatory Rapid Appraisal for Community Development: A training manual based on experiences in the Middle East and North Africa**, *Save the Children Fund and International Institute for Environment and Development. Price £8.50, available from ITDG. 150 pages, paperback.*

The authors suggest that this manual and the course described are suitable for use by a team of trainers when at least one is experienced in adult non-formal training techniques and another has practical experience of participatory methods and rapid appraisal. Tackles technical issues well.

Jake Pfohl (1989), **Participatory Evaluation: A Users Guide**, *PACT, New York. Price $15.00. 81 pages, paperback in plastic binder, 215 x 280mm.*

This guide was developed by a USAID programme in Sri Lanka. It is clearly written and takes users through the main steps in evaluation. It attempts to tackle some difficult technical exercises as simply as possible. This guide would be a good back-up resource for a trainer.

Anil Choudhary and Rajesh Tandon, **Participatory Evaluation: Issues and Content**, *Society for Participatory Research in Asia, 42, Tughlakabad Institutional Area, New Delhi-62. Fax 91-11-6442728. Price US $10.00. 80 pages, paperbound, 220 x 280mm.*

Short introduction followed by eight illustrative case studies of the participatory evaluation of community development projects in India. Useful for trainers wishing to conduct participatory evaluation or learn about aspects of community development in India.

Willem van der Eyken (1992), **Introducing Evaluation**, *Bernard van Leer Foundation, PO Box 82334, 2508 EH The Hague, The Netherlands. Single copies available free. 57 pages. Paperback, 210 x 295mm.*

Easy to read introduction to evaluation. A very good starting point for anyone wishing to learn about evaluation. Most of the examples are taken from ECD projects. Excellent list of further resources. This resource list has not repeated the resources listed in the above publication.

It should be noted that nearly all the training manuals on community development include training sessions in evaluation skills.

Skills for training

A large number of books address the different skills that trainers need to perform well. See the sections in many of the community development training manuals listed above.

While some of the publications by Pfeiffer & Company (see above for address) are excellent on this issue, note, however, that the three Pfeiffer publications listed above address different issues. Another very good and less expensive source is the Kogan Page Practical Trainer Series (Kogan Page, 120 Pentonville Road, London N1 9JN, UK).

Although some of the following materials are written for a business audience, the titles selected generally make points applicable to a wider audience.

David Leigh (1991), **A Practical Approach to Group Training**, *Kogan Page Limited, 120 Pentonville Road, London N1 9JN, UK. Price £14.95. (Also available from Pba) 192 pages, paperback, 170 x 215mm.*

A very good, easy to read guide with a large number of practical suggestions for group training. The book discusses the design and development of training courses and the necessary delivery and instruction skills. For example, it details the advantages and disadvantages of different ways of arranging the teaching area and the use of visual aids. It covers areas not often discussed like the influence of non-verbal behaviour, the use of your own voice, handling problem people and other matters.

Nancy Stimson (1991), **How to Write and Prepare Training Materials**, *Kogan Page, London. Price £14.95. (Also available from Pba) 176 pages, paperback, 170 x 215mm.*

While much of what the author has to say may seem obvious, this book provides a good reminder of the pitfalls many trainers fall into when preparing written material for trainees. It not only covers course materials but also forms, letters, use of sources and much else.

Tony Spinks and Phil Clements (1993), **A Practical Guide to Facilitation Skills**, *Kogan Page, London. Price £18.95. (Also available from Pba)*

Clear guide to the main issues in learning to be a good facilitator. Good summaries and trainer's notes. As this subject is very culture bound, readers should interpret in the light of their own experience.

Brian Auvine, et al (1977), **A Manual for Group Facilitators,** *The Centre for Conflict Resolution, 731 State Street, Madison, Wisconsin 53073, USA. Price $14.95. 90 pages, plastic binding for easy photocopying, 210 x 295mm.*

Excellent manual with many tips and exercises for dealing with the more difficult moments in groupwork. This manual is aimed at persons inexperienced in performing the role of facilitator, but who are called on to act in that capacity. Many good references. This book is written primarily for non-profit organisations. Recommended for group facilitators.

Institute for Development Training (1993), **Communication and Counselling Skills**, *Module 2 of Training Course in Women's Health, Institute for Development Training, North Carolina, USA. (Available from PACT Price $7.50. Also available in Spanish) 85 pages, paper in plastic binding for easy photocopying, 215 x 280mm.*

This is the second of 11 modules on women's health. The module is self-instructional but would be useful for a trainer looking for material on counselling and communication. It includes a number of exercises for trainees.

● The use of teaching aids

A number of the following are worth reading before any trainer embarks on using any teaching aid. They also provide good advice on enlivening presentations.

Jonathon Zeitlyn (1992), **Appropriate Media for Training and Development**, *Tool Publications, Sarphatistraat 650, 1018 AV Amsterdam, The Netherlands, and University Press Ltd, Red Crescent Building, 114 Motijheel C/A, Dhaka, Bangladesh. (Available from ITDG, price £9.95) 226 pages, paperbound.*

This book is a product of workshops for trainers in Bangladesh and Egypt. It provides a very good practical guide to developing and using different media for participatory training. A useful handbook to work through.

David Flegg and Josephine McHale (1991), **Selecting and Using Training Aids**, *Kogan Page, 120 Pentonville Road, London N1 9JN, UK. Price £14.95. (Also available from Pba) 144 pages, paperback, 170 x 215mm.*

Thorough discussion of training aids and training method. Discusses flipcharts, projectors, audio, video and other methods. Plenty of trainer's tips.

Jean Rogers Ryan (1987), **Tools for Teaching,** *Manual R0067, Peace Corps.*
Dennis Pett, ed (1989), **Audiovisual Communication Handbook,**
Manual M0020, Peace Corps.

See page 8 for details regarding price and obtaining Peace Corps publications.
The points made earlier concerning Peace Corps publications apply to these two books.

Both the above Peace Corps publications contain useful information for projects and training. **Tools for Teaching** was developed in work in the Phillipines and is based on training workshops with course and session outlines. As the **Handbook** is organised as a reference with description of techniques, its use is more likely to be as a resource for a trainer.

The Copy Book: Copyright free illustrations for development
(1991), Intermediate Technology Publications, 103-5 Southampton Row, London WC1B 4HH, UK. Price £10.95. 102 pages of illustrations (over 400 drawings), paperback, 210 x 295mm.

An introductory section explaining how users can copy, expand and adapt illustrations to produce their own graphics. Also tips on combining drawings, producing clear lettering and all manner of ways to improve visual presentation. The illustrations are very varied and cover many village and rural situations. This book is recommended for projects without access to equipment to produce modern graphics.

The following two packs from the Development Education Centre provide examples of how photographs can be used as training aids.

What is a Family? *Development Education Centre, 998 Bristol Road, Selly Oak, Birmingham B29 6LE, UK. Cost £5.00 plus £0.50 VAT plus 20% for postage. Pack - 32 page manual, 24 photographs 145 x 210 mm.*

Working Now. *Development Education Centre, 998 Bristol Road, Selly Oak, Birmingham B29 6LE, UK. Cost £5.00 plus £0.50 VAT plus 20% for postage. Pack - 33 page manual, 16 A4 size photographs.*

These two packs are well produced examples of the use of photographs in training. Both manuals have a number of exercises using photographs to open out discussions on assumptions, stereotypes and to let participants use their creative imagination. The photographs include images of many different ethnic groups in a wide variety of situations. For many projects, these packs can be used as a model to produce similar material for their own society.

● Other resources for training

David Werner (1992), **Where There is No Doctor**, *Hesperian Foundation, Palo Alto, California, USA, and MacMillan, London, UK. (Available from TALC,*

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PO Box 49, St. Albans, Herts AL1 4AX, UK, in English, Arabic, Portugese, Spanish, and an African edition in English. Prices between £3.50 and £5.50 depending on language. Also available from ITDG, Prices £7.50 to £8.99) 466 pages, paperback, 210 x 295mm.

A classic text, published in many editions and languages for different regions of the world. Trainers should check appropriate edition. Important aid in community development training. Well organised, practical guide which encourages people to take the lead in caring for their health. Its approach to health care implies respect for people's dignity and a belief in their abilities which fits well with the philosophy of this Training Pack. The book has many illustrations.

Murray Dickson (1987), **Where There is No Dentist**, *Hesperian Foundation. (Available from TALC PO Box 49, St. Albans, Herts AL1 4AX, UK, in English and Portugese, price £3.00) 96 pages, paperback.*

Companion work to **Where There is No Doctor**. Not as widely distributed but similar comments apply.

Judith Marshall et al, **Training for Empowerment**, *Doris Marshall Institute for Education and Action, 818, College St., Suite 3, Toronto, Canada M6G 1C8.*

This is a kit of materials based on an exchange of literacy workers from Mozambique to Nicaragua and Brazil. Pack includes 'Activities and Tools' with good illustrations. This is a positive example of the benefits of an imaginative South-South exchange.

Nic Fine and Fiona Macbeth (1992), **Playing with Fire: Training for the creative use of conflict**, *Youth Work Press, 17-23 Albion Street, Leicester LE1 6GD, UK. Price £14.95. 174 pages, wirebound with paper covers, 210 x 295mm.*

This book is aimed at youth workers in the UK. It contains the documentation for a 60 hour course divided into 24 sessions. A good introduction followed by detailed and imaginative exercises, all fully documented. Many ideas could be used or adapted by projects, especially when issues of conflict between adolescents and/or between adults are a serious problem.

Finally, important resources for training already exist within projects. An example of this comes from Servol in Trinidad. Servol, which runs early childhood and adolescent programmes, has produced an Instructor's Handbook for use in its Adolescent Development Programme. The handbook, entitled 'Parenting', has been created and tailored from a number of sources. It can be used as an education and training package to meet the needs of young parents and potential parents in their community. The 140 page handbook is attractively presented, well illustrated and packed with information. For information on availability, contact Servol, 91 Frederick Street, Port of Spain, Trinidad, W.I.

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Enhancing the skills of early childhood trainers

Resource list

1 Introduction to the training pack

2 Delivering effective training
The practical focus of the pack

3 Guide to the development of the young child
Reference materials: comprehensive information on the development of babies and young children particularly their psycho-social development

4 Rationale for experiential/ participatory methods
Reference materials: the rationale for advocating these methods

5 Resource list
An annotated list of selected training materials

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